

06-28-12 Acct # change:

1003803000

09-07-07 Acct # change:

1020669700

Sewer

Acct. #:



0511559802

Company: BRIDGETON LANDFILL LLC

Address: 13570 St Charles Rock Road

City: Bridgeton

State and Zip: MO , 63044

Ind_id

17940

File Code

40

File Description

PERMIT



Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

September 16, 2019

Erin Fanning
Division Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Discharge Permit No: 1003803000 - 1.4
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Ms. Fanning:

The Metropolitan St. Louis Sewer District has developed an Industrial Wastewater Discharge Permit for the above premise. Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the permit on the following: information that you supplied in your Industrial User Questionnaire, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the previous permit. Changes include:

- Removed or modified special conditions that were contingent upon the installation of an approved pretreatment system.
- Added Special Certification O that corresponds with Special Condition A.4 that was left off the previous permit.
- Added Special Condition C.7 and Special Certification R for yearly calibration and certification of discharge flow meter.

The previous permit, effective August 01, 2017, is voided as of the effective date of the enclosed permit.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The first report due date, for this reissued permit, is based on a complete calendar quarter monitoring period. The permittee remains responsible for reporting for the preceding calendar quarter under the previous permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals. Instructions for completing the report form also are enclosed with this letter.

If you disagree with any of the terms or conditions of this permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the permit.

Please be aware that an annual permit fee will be added to your monthly sewer bill, or you will receive a separate bill, to cover administrative costs associated with the permit, as provided for under MSD ordinance 12413. The fee is normally added to the last bill of each calendar year, or shortly thereafter.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8721, if you have any questions.

Sincerely,

METROPOLITAN ST. LOUIS SEWER DISTRICT

Chris Bulmahn

Chris Bulmahn
Associate Engineer

Enclosures: Draft Industrial Wastewater Discharge Permit

cc: Doug Mendoza

By Certified Mail: 7017 2400 0000 7272 4018

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
HAULED AND INDUSTRIAL WASTEWATER
DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.4

EFFECTIVE DATE: September 01, 2019
EXPIRATION DATE: August 31, 2024

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 013, 014


In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 15048, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system and at the Metropolitan St. Louis Sewer District's hauled waste receiving station. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT


Chris Bulmahn
Associate Engineer


Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW27, SW of the N corner of concrete containment wall for Effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown+ Plant & Equipment Washdown (Transfer station & Jetter trucks) + Storm Water (Contaminated from leachate spills) + Condensate (Methane burn off condensate) + Landfill Leachate (Including byproducts from underground thermal event)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit*	Limit Type**	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Transmittance Unfiltered	*****	Daily Avg	*****
Ammonia (as N) [mg/L]	*****	Daily Avg	Once/3 mo
Gross Alpha [pci/L]	*****	Daily Avg	Once/3 mo
Gross Beta [pci/L]	*****	Daily Avg	Once/3 mo
Gross Gamma [pci/L]	*****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10000000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 15048 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.8 of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only
- ***** See Special Condition A.3

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 014

Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 0 (up to 314,769 GPD when not discharging on site)

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown (Transfer station & Jetter trucks)
+ Landfill Leachate (Including byproducts from underground thermal event) + Condensate (Methane burn off condensate)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit*	Limit Type**	Sampling Frequency
Flow [GPO]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	****	Instant	Once/3 mo
Temperature [Deg C]	****	Instant	Once/3 mo
pH [SU]	****	Instant	Once/3 mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10000000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Uranium (Total)	****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	****	Daily Avg	Once/3 mo
Benzene	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	****	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	****	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	****	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	****	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	****	Instant	Once/3 mo
Total Toxic Organics [mg/L]	****	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 15048 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.8 of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** Monitoring requirement only

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

- Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.
- For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.
- For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 15048. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- a. All facility and sample description information required on the District's reporting form.
- b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- c. Daily flows, with dates, for all measurements or estimates made within the quarter.
- d. Any certification statements required pursuant to the Special Conditions in Section II.
- e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 15048. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

<u>For the calendar quarter of:</u>	<u>The report must be postmarked no later than:</u>
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by October 28, 2019.**

For non-quarterly self-monitoring requirements, the permit year commences on July 01.

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 15048, significant new or increased discharge means:

- a. Any discharge from a new process or facility or a new source.
- b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
- c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
- d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 15048.
- e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
- f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 15048.
- g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates

and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 15048, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 15048 and 13701 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 15048.

L. SEWER USE & HAULED WASTE ORDINANCES:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 15048 and the District Hauled Waste Ordinance 13701.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. Untreated or Partially-treated Hauled Discharge

For any wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.2. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point **013**, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.3. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 15048 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited. If a discharge to the Missouri River treatment plant is requested when the UV disinfection process is being utilized, ultraviolet transmittance must be analyzed and submitted to the District so an evaluation of the requested discharge can be made.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.4. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Discharge of Contaminated Storm Water

Permittee is authorized to discharge storm water storm water contaminated with leachate to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.4. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1 Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point **013** (on site) or sampling point **014** (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 012 (NPDES 007), 015 (NPDES 008) or 016 (NPDES 009). These discharges are subject to State regulation under NPDES permit number MO-0112771. Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to special condition B.3. For storm water that is contaminated with material other than leachate, permittee is authorized to route it to the permittee's pretreatment plant, however should the permittee plan to route it directly to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 15048.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.4 Materials exempt from Radioactive Discharge Reporting Requirements (non-NRC licensed materials only)

As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met.

C.5. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.6. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

C.7 Calibration Required for Wastewater Discharge Flow Meter

Permittee must calibrate its wastewater discharge flow meter during the first calendar quarter of each year, and submit records showing the calibration with the self-monitoring report for that quarter. The permittee may calibrate the flow meter more frequently, and shall calibrate the flow meter as soon as the permittee becomes aware that the meter may no longer be in calibration. Starting with the 1st quarter 2020, the permittee shall certify on each quarterly self-monitoring report that its wastewater discharge flow meter was calibrated within the current calendar year and, to the best of the permittee's knowledge, remains in calibration.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 14395, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling **014** (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **013**. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave. St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within

15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave. St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Volumetric Flow Rate Discharge Restrictions

The flow that is discharged from Bridgeton Landfill into the District Collection System at sample point **013** shall not:

- Exceed a 24 hour rolling average flow rate of 260 gallons per minute,
- Exceed a 4 hour rolling average flow rate of 290 gallons per minute,
- Exceed a maximum instantaneous flow rate of 500 gallons per minute,

unless otherwise approved by the District.

F.2. Hauled Waste Variance Limit

All District Sewer Use Ordinance prohibitions and categorical pretreatment standards continue to apply. However, the specific ordinance limitations for individual pollutants shall not be applicable to approved hauled wastewaters, per Ordinance provisions for hauled waste variances, excepting pollutants specifically listed in the permit.

THIS IS THE LAST PAGE OF THIS PERMIT

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

O - No Discharge of Hazardous Hauled Waste

For permit special conditions that prohibit discharge of hazardous waste to the District, you are required to make the following certification:

_____ I certify, since the last discharge monitoring report, there has been no discharge of hazardous waste to the District.

R - Discharge Flow Meter Was Calibrated & Remains in Calibration

For permits that require submittal of reports of volume discharge using wastewater discharge flow meters, you are required to make the following certification:

_____ I certify the wastewater discharge flow meter was calibrated within the current calendar year. Calibration of the wastewater discharge flow meter was last performed on _____. Since the last discharge monitoring report, and to the best of my knowledge, the flow meter remains in calibration.

PART IV: GENERAL CERTIFICATION STATEMENTS

B. Certify Discharge Monitoring Report & Attachments

All permittees must sign and complete the information below:

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: _____

Title: _____ Telephone: _____

Signature: _____ Date: _____



Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

August 28, 2019

Erin Fanning
Division Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Discharge Permit No: 1003803000 - 1.4
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Ms. Fanning:

The Metropolitan St. Louis Sewer District has completed its review of your application for renewal of the Industrial Wastewater Discharge Permit for the above premise. The current permit expires on August 31, 2019.

Federal regulation 40 CFR 403 requires MSD to issue a permit to you. We based the draft permit on the following: information that you supplied in your Industrial User Questionnaire, your Proposed Permit Modification packet, on results from previous wastewater samplings and inspections, and on requirements contained in existing MSD ordinances and state and federal regulations.

Except as noted in this paragraph, the terms and conditions of this permit are substantially the same as in the previous permit. Changes include:

- Removed or modified special conditions that were contingent upon the installation of an approved pretreatment system.
- Added Special Certification O that corresponds with Special Condition A.4 that was left off the previous permit.
- Added Special Condition C.7 and Special Certification R for yearly calibration and certification of discharge flow meter.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the draft permit, and we will proceed to issue the final permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8721, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Chris Bulmahn

Chris Bulmahn
Associate Engineer

Enclosures: Draft Industrial Wastewater Discharge Permit

cc: Doug Mendoza

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
HAULED AND INDUSTRIAL WASTEWATER
DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.4

EFFECTIVE DATE: September 01, 2019
EXPIRATION DATE: August 31, 2024

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 013, 014

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. , the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system and at the Metropolitan St. Louis Sewer District's hauled waste receiving station. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Chris Bulmahn
Associate Engineer

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW27' SW of the N corner of concrete containment wall for Effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown+ Plant & Equipment Washdown (Transfer station & Jetter trucks) + Storm Water (Contaminated from leachate spills) + Condensate (Methane burr off condensate) + Landfill Leachate (Including byproducts from underground thermal event)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit*	Limit Type**	Sampling Frequency
Flow [GPO]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Transmittance Unfiltered	*****	Daily Avg	*****
Ammonia (as N) [mg/L]	*****	Daily Avg	Once/3 mo
Gross Alpha [pci/L]	*****	Daily Avg	Once/3 mo
Gross Beta [pci/L]	*****	Daily Avg	Once/3 mo
Gross Gamma [pci/L]	*****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10000000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.8 of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only
- ***** See Special Condition A.3

DRAFT

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 014

Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 0 (up to 314,769 GPD when not discharging on site)

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown (Transfer station & Jetter trucks)
+ Landfill Leachate (Including byproducts from underground thermal event) + Condensate (Methane burn off condensate)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit*	Limit Type**	Sampling Frequency
Flow [GPO]	****	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	****	Instant	Once/3 mo
Temperature [Deg C]	****	Instant	Once/3 mo
pH [SU]	****	Instant	Once/3 mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10000000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Uranium (Total)	****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	****	Daily Avg	Once/3 mo
Benzene	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	****	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	****	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	****	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	****	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	****	Instant	Once/3 mo
Total Toxic Organics [mg/L]	****	Instant	Once/3 mo

- * Limits are based on MSD Ordinance and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.8 of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** Monitoring requirement only

DRAFT

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

- Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.
- For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.
- For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 15048. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- All facility and sample description information required on the District's reporting form.
- Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- Daily flows, with dates, for all measurements or estimates made within the quarter.
- Any certification statements required pursuant to the Special Conditions in Section II.
- Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 15048. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:

January 1 through March 31

April 1 through June 30

July 1 through September 30

October 1 through December 31

The report must be postmarked no later than:

April 28

July 28

October 28

January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by October 28, 2019.**

For non-quarterly self-monitoring requirements, the permit year commences on July 01.

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 15048, significant new or increased discharge means:

- a. Any discharge from a new process or facility or a new source.
- b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
- c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
- d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 15048.
- e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
- f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 15048.
- g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates

and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 15048, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 15048 and 13701 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 15048.

L. SEWER USE & HAULED WASTE ORDINANCES:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 15048 and the District Hauled Waste Ordinance 13701.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. Untreated or Partially-treated Hauled Discharge

For any wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.2. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point **013**, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.3. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited. If a discharge to the Missouri River treatment plant is requested when the UV disinfection process is being utilized, ultraviolet transmittance must be analyzed and submitted to the District so an evaluation of the requested discharge can be made.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.4. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Discharge of Contaminated Storm Water

Permittee is authorized to discharge storm water storm water contaminated with leachate to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.4. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1 Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point **013** (on site) or sampling point **014** (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 012 (NPDES 007), 015 (NPDES 008) or 016 (NPDES 009). These discharges are subject to State regulation under NPDES permit number MO-0112771. Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to special condition B.3. For storm water that is contaminated with material other than leachate, permittee is authorized to route it to the permittee's pretreatment plant, however should the permittee plan to route it directly to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the

District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance .

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.4 Materials exempt from Radioactive Discharge Reporting Requirements (non-NRC licensed materials only)

As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met.

C.5. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.6. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

C.7 Calibration Required for Wastewater Discharge Flow Meter

Permittee must calibrate its wastewater discharge flow meter during the first calendar quarter of each year, and submit records showing the calibration with the self-monitoring report for that quarter. The permittee may calibrate the flow meter more frequently, and shall calibrate the flow meter as soon as the permittee becomes aware that the meter may no longer be in calibration. Starting with the 1st quarter 2020, the permittee shall certify on each quarterly self-monitoring report that its wastewater discharge flow meter was calibrated within the current calendar year and, to the best of the permittee's knowledge, remains in calibration.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 14395, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling **014** (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **013**. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave. St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within

15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave. St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Volumetric Flow Rate Discharge Restrictions

The flow that is discharged from Bridgeton Landfill into the District Collection System at sample point **013** shall not:

- Exceed a 24 hour rolling average flow rate of 260 gallons per minute,
- Exceed a 4 hour rolling average flow rate of 290 gallons per minute,
- Exceed a maximum instantaneous flow rate of 500 gallons per minute,

unless otherwise approved by the District.

F.2. Hauled Waste Variance Limit

All District Sewer Use Ordinance prohibitions and categorical pretreatment standards continue to apply. However, the specific ordinance limitations for individual pollutants shall not be applicable to approved hauled wastewaters, per Ordinance provisions for hauled waste variances, excepting pollutants specifically listed in the permit.

THIS IS THE LAST PAGE OF THIS PERMIT

DRAFT

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

O - No Discharge of Hazardous Hauled Waste

For permit special conditions that prohibit discharge of hazardous waste to the District, you are required to make the following certification:

_____ I certify, since the last discharge monitoring report, there has been no discharge of hazardous waste to the District.

R - Discharge Flow Meter Was Calibrated & Remains in Calibration

For permits that require submittal of reports of volume discharge using wastewater discharge flow meters, you are required to make the following certification:

_____ I certify the wastewater discharge flow meter was calibrated within the current calendar year. Calibration of the wastewater discharge flow meter was last performed on _____. Since the last discharge monitoring report, and to the best of my knowledge, the flow meter remains in calibration.

PART IV: GENERAL CERTIFICATION STATEMENTS

B. Certify Discharge Monitoring Report & Attachments

All permittees must sign and complete the information below:

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: _____

Title: _____ Telephone: _____

Signature: _____ Date: _____

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT FACT SHEET

Check one:

FIRST TIME PERMIT ☐

RENEWAL ☒

Prepared by: Chris Bulmahn

Date: 8/12/2019

Reviewed by: MM

Date: 8-28-19

PERMIT NO: 1003803000 - 1.4

EFFECTIVE DATE: 9/1/2019

EXPIRATION DATE: 8/31/2024

COMPANY NAME: BRIDGETON LANDFILL LLC

PREMISE ADDRESS: 13570 St. Charles Rock Road

RELATED ACCOUNT NUMBERS: NA

TYPE OF OPERATION: Inactive municipal solid waste landfill

TOTAL NUMBER OF SAMPLING POINTS: 2 or NO SAMPLING POINT ☐

NUMBER OF: ORDINANCE 2 CATEGORICAL ☐ COMBINED ☐

CATEGORICAL INDUSTRY? YES ☐ NO ☒

If Yes, 40 CFR ☐ Subpart ☐

PSES ☐ PSNS ☐

40 CFR ☐ Subpart ☐

PSES ☐ PSNS ☐

EXTRA STRENGTH SURCHARGE? YES ☐ NO ☒ If Yes, BOD ☐ COD ☐ TSS ☐

RETURN FACTOR? YES ☐ NO ☒ If Yes, Acct #(s) ☐ RF ☐

SPECIAL CONDITIONS REQUIRED? YES ☒ NO ☐

All SMR start dates begin at start of calendar quarter: ☒ same as/containing permit effective date
☐ following permit effective date

SMR General Cert. B attached to first permit SP (013) at reporting frequency of once/3mo? Y ☒ N ☐

SUPPORTING DOCUMENTS ATTACHED

	YES	NO	N/A
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pollutant & Limitations Documentation Sheets:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Permit Preparation Checklist:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Production-based Standards Calc. Sheets (for Sampling Points <input type="checkbox"/>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mass-based Standards Calc. Sheets (for Sampling Points <input type="checkbox"/>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Equivalent Concentration Limits Sheets (for Sampling Points <input type="checkbox"/>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Most Strict Limits Sheets (for Sampling Points <input type="checkbox"/>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Combined Wastestream Formula Sheets (for Sampling Points <input type="checkbox"/>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Text of any Customized Special Conditions: If Yes, for which SCs: <u>multiple</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: <u>March 1, 2019 email of proposed permit modifications</u>			

COMMENTS (Include notations of any significant changes from last permit):

Removed or modified special conditions that were contingent upon the installation of an approved pretreatment system. Pretreatment system has shown that it is capable of treating the leachate to acceptable levels. Added Spec Cert O for Spec Cond B.9 that was left off of the last revision. Added Spec Cert R for Flow Meter Calibration

PERMIT NO: 1003803000 - 1.4

SPECIAL CONDITIONS NOT TIED TO SPECIFIC SAMPLE POINTS

Special Condition:	# D.3 (B.1)	# D.12 (B.2, B.3)	# E.14 (C.2)	# E.18 (C.3)	# E.21 (C.4, C.5, C.6)	# E.37 (C.7)	# F.4 (D.4)	#
List any related SMR certifications:	#	#	#	#	#	# R	#	#
SMR certification frequency:	[none]	[none]	[none]	[none]	[none]	once/yr	[none]	[none]
List any related General Reports:	#	#	#	# Rad Disch	# Custom Non- Standard	# Flow Meter Calibration	#	#
General Report frequency:	[none]	[none]	[none]	once 3 mo	[none]	once/yr	[none]	[none]

Are all the SMR certifications listed above associated with first permit sample point (013)? YES ☒ NO ☐ N/A (No Certs) ☐

Check here if there are no non-SP-specific Special Conditions: ☐

SAMPLING POINT REFERENCE NUMBER: 013

TYPE: Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Landfill Leachate (Including byproducts from underground thermal event) + Cooling Tower + P&E (Transfer station & jetter trucks) + Storm Water (Contaminated from leachate spills) + Condensate (Methane burnoff condensate)

Flow Rate: 314.769 Units: GPD Basis for Flow Rate: IUQ

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation (Ord 15048, CFR, etc)	Monitoring frequency	Basis for monitoring freq. (std for vol, etc; innocuous, low flow, etc)	Any OK?
GENERAL:					
FLOW	Standard		once 3 mo	Billed for discharge volume	
BOD	Standard		once 3 mo	Standard for volume	<input type="checkbox"/>
COD	Standard		once 3 mo	Standard for volume	<input type="checkbox"/>
O&G	Standard	Ord. 15048	once 3 mo	Standard for volume	
pH	Standard	Ord. 15048	once 3 mo	Standard for volume	
Temp	Standard	Ord. 15048	once 3 mo	Standard for volume	
TSS	Standard		once 3 mo	Standard for volume	<input type="checkbox"/>
Ord. TTO	Standard, long list of vols&semi-vols	Ord. 15048	once 3 mo	Due to high conc. in discharge	
Ammonia, Mg	Present in discharge		once 3 mo	Standard for volume	<input type="checkbox"/>
Fe, Total Phenols	Present in discharge	Ord. 15048	once 3 mo	Standard for volume	<input type="checkbox"/>
UV Transmittence	low transmittence causes interference at Mo Rvr T.P. during disinfection season		batch	See special condition B.10 (A.3), per batch if discharging to Mo Rvr Treatment Plant	<input type="checkbox"/>
PRIORITY/CATEGORICAL:					
As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn	Present in discharge	Ord. 15048	once 3 mo	Standard for volume	<input type="checkbox"/>
Gross Alpha, Beta & Gamma; Hydrogen 3, Ra-226, Ra-228, Uranium	Potential to be present; adjacent to known source	Ord. 15048 & NRC limitations	once 3 mo	Standard for volume	<input type="checkbox"/>

Special Condition:	# B.10 (A.2)	# E.21 (C.1)	# F.3 (D.2)	# C.5 (F.1)	#	#	#	#
List related SMR certs:	# [none]	# [none]	# [none]	# [none]	# [none]	# [none]	# [none]	# [none]
SMR cert frequency:								
List related General Rpts:	# [none]	# [none]	# Disch Vol once/mo	# [none]	# [none]	# [none]	# [none]	# [none]
General Rpt frequency:								

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☒ NO ☐ Explain: Changed monitoring frequency to per batch if discharging to Mo Rvr T.P., UV transmittence does not interfere with the disinfection process at Bissell T.P.

SAMPLING POINT REFERENCE NUMBER: 014

TYPE: Ord ☒ Cat ☐ Comb ☐

Wastewater Components: Landfill Leachate (Including byproducts from underground thermal event) + P&E (Transfer station & jetter trucks) + Condensate (Methane burnoff condensate)

Flow Rate: 0 (up to 314,769 hauled when not discharging on site) Units: GPD Basis for Flow Rate: IUQ

Pollutants	Basis for inclusion (or exclusion of std polls)	Basis for limitation (Ord 15048, CFR, etc)	Monitoring frequency	Basis for monitoring freq. (std for vol, etc; innocuous, low flow, etc)	Any OK?
GENERAL:					
FLOW	Standard		once 3 mo	Billed for discharge volume	
BOD	Standard		once 3 mo	Same as onsite requirements	<input type="checkbox"/>
COD	Standard		once 3 mo	Same as onsite requirements	<input type="checkbox"/>
O&G	Standard	Ord. 15048	once 3 mo	Same as onsite requirements	
pH	Standard	Ord. 15048	once 3 mo	Same as onsite requirements	
Temp	Standard	Ord. 15048	once 3 mo	Same as onsite requirements	
TSS	Standard		once 3 mo	Same as onsite requirements	<input type="checkbox"/>
Ord. TTO	Standard, long list of vols&semi-vols	Ord. 15048	once 3 mo	Same as onsite requirements	
Ammonia, Mg	Present in discharge		once 3 mo	Same as onsite requirements	<input type="checkbox"/>
Fe, Total Phenols	Present in discharge	Ord. 15048	once 3 mo	Same as onsite requirements	<input type="checkbox"/>
PRIORITY/CATEGORICAL:					
As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn	Present in discharge	Ord. 15048	once 3 mo	Same as onsite requirements	<input type="checkbox"/>
Gross Alpha, Beta & Gamma, Hydrogen 3, Ra-226, Ra-228, Uranium	Potential to be present; adjacent to known source	Ord. 15048 & NRC limitations	once 3 mo	Same as onsite requirements	<input type="checkbox"/>

Special Condition: # B.9 (A.4) # B.10 (A.1) # C.7 (F.2) # D.13 (B.4) # E.21 (C.1) # F.3 (D.3) # F.4 (D.1) # H.1 (E.1) # H.2 (E.2)

List related SMR certs: # O once 3 mo # [none] # [none] # [none] # [none] # [none] # [none]

List related General Rpts: # [none] # [none] # [none] # [none] # [none] # [none]

General Rpt frequency: # [none] # [none] # [none] # [none] # [none] # [none]

Is this an Ord or Comb SP w/mon for TTO and that has no TOs on site? YES ☐ NO ☒ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐

Any significant changes? YES ☐ NO ☒ Explain: _____

PERMIT PREPARATION CHECKLIST – PART 1
(Fact Sheet Attachment)

Company Name: BRIDGETON LANDFILL LLC

Permit No.: 1003803000 - 1.4

Effective Date: 9/1/2019

Prepared by: Chris Bulmahn

Date: 08/12/2019

REVIEW THE PRETREATMENT DATABASE (PIMS), INDUSTRY FILE AND PERMIT APPLICATION.
ANSWER THESE QUESTIONS & UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ☒ No ☐
If no, add _____ delete: _____
2. Is user in surcharge? Yes ☐ No ☒
If yes, date last certified: _____
If yes, Special Condition F.2 applies.
3. Does user's premise have more than one MSD account? Yes ☐ No ☒
If yes, were all account numbers correctly listed (including occupant #s)? Yes ☐ No ☐
If no, have account numbers been corrected in database before proceeding? Yes ☐ No ☐
4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ☐ No ☒
If yes, list acct no., RF and date last updated:
Acct _____ RF _____ Updated _____
Acct _____ RF _____ Updated _____
If yes, Special Condition F.1 applies.
5. Does user discharge water from a source not included in the MSD Billing system? Yes ☒ No ☐
If yes, Special Condition F.3 & General Report "Discharge Volume for Billing" apply.
If yes, Is a flow meter used to record the volume discharged from this other source? Yes ☒ No ☐
If yes, SC E.37 and Gen. Rpt. "Calibration of Discharge Flow Meter" apply.
If no, SC E.38 applies.
6. Have you established agreement among permit application, water consumption records and PIMS on component flows at each SP, total SP flows and total premise flow? Yes ☒ No ☐
If no, explain _____
7. Has user been granted any variances from ordinance limitations? Yes ☐ No ☒
If yes, Application Date: Variance for Arsenic has expired.
Approval Date: _____, or approved as part of this permit issuance? Yes ☐
(Variances cannot last more than 5 years after approval)
If yes, Parameter(s) _____ at SP(s) _____
If yes, Special Condition C.4 applies.
8. Have any numerical limitations been applied to user, in addition to those already contained in the ordinance? Yes ☒ No ☐
If yes, Parameter(s) Flow Rate Discharge at SP(s) 013
Date limit(s) originally applied: 8/1/17, or as part of variance above? ☐
If yes, are Special Conditions, other than the standard special conditions, required? Yes ☒ No ☐
If yes, explain under "non-standard special conditions" question below.
Special Condition C.5 for Volumetric Flow Rate Discharge Restrictions
9. Does user discharge any radioactive materials? Yes ☒ No ☐
If yes, Special Condition E.18 & General Report "Radiation Discharge" apply.
10. Does user generate wastes and/or wastewater by genetic engineering research? Yes ☐ No ☒
If yes, Special Condition B.12 applies.
11. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ☒ No ☐
If no, explain: _____
If no, is documentation sufficient to use Special Condition
E.5 ☐ "Sampling Not Required at Connections with NO SP and with SP on parts",
E.6 ☐ "Sampling Not Required at Connection with NO SP on it",
E.7 ☐ "Sampling Not Required at Connection with SP on only part of it", or
E.8 ☐ "Sampling Not Required at Permittee with No SP"?
If no, is compliance schedule necessary to obtain documentation? Yes ☐ No ☐
If yes, Special Condition G.1 is necessary.
12. Does premise require use of "upstream/downstream" sampling? Yes ☐ No ☒
If yes, Upstream SP # _____ & Downstream SP # _____
If yes, Special Conditions D.11 and E.9 apply.
13. Are there any inactive connections to MSD sewers? Yes ☐ No ☒
If yes, Special Condition E.10 applies.
14. Have you verified, in PIMS, the SP location descriptions are complete and adequate? Yes ☒ No ☐
15. Have you verified, in PIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ☒ No ☐

16. Does user have any discharges subject to NPDES permitting regulations? Yes ☒ No ☐
 If yes, list MSD points & corresponding NPDES points: MSD004=003, MSD009=004, MSD010=005, MSD012=007, MSD015=008, MSD016=009
 If yes, Special Condition E.14 applies.
17. Do any SPs convey stormwater in addition to regulated wastewater? Yes ☒ No ☐
 If yes, list points: 013 and note on P&LD sheets.
 If yes, Special Condition D.10 applies. contaminated from leachate, does not apply
18. Are any SPs Dry Justified in PIMS? Yes ☐ No ☒
 If yes, list points _____ and note on P&LD sheets.
 If yes, no self-monitoring is required, and Special Condition E.3 applies.
19. Are there SPs where user discharges only non-process wastewater? Yes ☐ No ☒
 If yes, does no self-monitoring requirement / Special Condition E.3 apply? Yes ☐ No ☐
 If yes, list points _____ and note on P&LD sheets.
20. Are there SPs with infrequent discharges that require coordination with the user for MSD to collect samples? Yes ☐ No ☒
 If yes, list points: _____ and note on P&LD sheets.
 If yes, Special Condition D.14 applies.
21. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ☐ No ☒
 If yes, list points _____ and note on P&LD sheets.
 If yes, Special Condition D.1 applies.
22. Are there SPs with self-monitoring requirements, but at less than a quarterly frequency, for all parameters? Yes ☐ No ☒
 If yes, list points _____ and note on P&LD sheets.
 If yes, Special Condition E.4 applies.
23. Can local limits TTO be removed from monitoring at any ordinance SPs? Yes ☐ No ☒
 If yes, list points _____ and explain on P&LD sheets.
 If yes, does TTO also need to be removed from MSD's monitoring? Yes ☐ No ☐
 If yes, discuss with inspector (name: _____) and explain why it had been monitored by MSD: _____
24. Does user have a history of compliance problems at this or a previous location? Yes ☒ No ☐
 If yes, explain problems: Underground "fire" at landfill caused extremely high pollutant levels that required that they build a pretreatment system. Since completion of pretreatment system, levels have lowered enough to allow discharge to Bissell Treatment Plant.
 If yes, is a compliance schedule required? Yes ☐ No ☒
 If yes, Special Condition G.1 applies.
 Is supporting documentation attached? Yes ☐ No ☐
 If yes, are any other special requirements required? Yes ☒ No ☐
 Explain: SC B.10 for Multiple special conditions to insure proper operation of treatment system, discharge of treated wastewater and contingencies for problem situations.
25. Is user required to monitor for Total Phenols at an ordinance SP? Yes ☒ No ☐
 If yes, does Special Condition D.3 for Total Phenols monitoring options apply? Yes ☒ No ☐
26. Has user chosen to employ continuous monitoring techniques for:
 pH? If yes, list points _____. SC E.29 & Gen Rpt "Cont-Mon pH Excursions" apply. Yes ☐ No ☒
 Temp? If yes, list points _____. SC E.30 & Gen Rpt "Cont-Mon Temp Excursions" apply. Yes ☐ No ☒
 LEL? If yes, list points _____. SC E.31 & Gen Rpt "Cont-Mon LEL Excursions" apply. Yes ☐ No ☒
 If yes for pH or Temp, have corresponding SP limits in PIMS been set to 'Alert Only' and does PIMS Monitoring Special Instructions have notes re. field 'violations'? Yes ☐ No ☐
27. Does the company perform any processes for which summaries of activities are needed? Yes ☒ No ☐
 If yes, Special Condition E.33 & General Report "Process Activity Summary" apply.
Replaced by Special Condition D.12 customized to "Sampling and Reporting Frequencies."
28. Are special billing conditions, other than the standard Special Conditions, needed? Yes ☒ No ☐
 If yes, describe: Special Custom fees applied for hauled waste
 If yes, Special Condition F.4 applies.
 Does General Report "Discharge Volume for Billing" apply? Yes ☒ No ☐
 Does General Report "Custom Non-Standard" apply? Yes ☒ No ☐
29. Are any Special Conditions, other than the standard special conditions, required? Yes ☒ No ☐
 If yes, explain: Same as for Q24 above
 Which Special Condition applies? Same as for Q24 above
 Is supporting documentation attached? Yes ☒ No ☐
 If no, explain: _____
 Does General Report "Custom Non-Standard" apply? Yes ☒ No ☐

30. Is user a hauled waste industry, discharging its wastewater at the Hauled Waste Station? Yes ☒ No ☐
 If yes, have ☒ permit title, ☒ cover page, & ☒ general conditions been modified? Yes ☒ No ☐
 If yes, Special Conditions B.9, C.7, D.13, H.1, and H.2 apply.
31. Is user classified as a Categorical Industrial User (CIU)? Yes ☐ No ☒
 If yes, complete part 2 of checklist. If no, STOP here.

List all the Special Conditions from Part 1 that are applicable to this permit.

List those that are specific to a sampling point on that sampling point's fact sheet, too.

List those that are not specific to a sampling point on the "Special Conditions Not Tied to Specific SPs" fact sheet, too.

General Report	Special Condition #	Sampling Point #
	B.9	014
	B.10 (x3)	013, 014, na
	C.5	013
	C.7	014
	D.3	na
	D.12 (x2)	na, na
	D.13	014
	E.14	na
Rad Discharge	E.18	na
Cust. Non Std	E.21 (x4)	(013 + 014), na, na, na
Calibration of Discharge Flow Meter	E.37	na
Discharge Volume for Billing	F.3 (x2)	013, 014
	F.4 (x2)	014, na
	H.1	014
	H.2	014

**DEPARTMENT OF ENVIRONMENTAL COMPLIANCE
MEMORANDUM**

MEMO TO: BRIDGETON LANDFILL LLC

ACCT #: 1003803000 - 1.4

FROM: Chris Bulmahn

SUBJECT: Modified Special Conditions for Permit Prep Checklist

DATE: August 23, 2019

B.10 (Special Condition A.1) Non-Standard Prohibited Discharges

On Site Discharge Prohibited Prior to District Approval of Pretreatment Plant

Discharge of wastewater through the onsite sewer (sampling point **013**) shall be prohibited prior to the District's declaration of acceptance of the permittee's pretreatment plant operational conditions.

B.10 (Special Condition A.2) Non-Standard Prohibited Discharges

Untreated or Partially-treated Hauled Discharge

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, only wastewater that has received normal pretreatment to prevent discharge prohibitions and has been discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there), is approved by this permit for hauling to District treatment plants and discharge. All other wastewater from the permitted facility that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District) must be approved for discharge separately by the District prior to hauling to District treatment plants and discharging.

Subsequent to the District's declaration of the permittee's pretreatment plant operational acceptance, for all wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

B.10 (Special Condition A.3) Non-Standard Prohibited Discharges

Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point **013**, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

B.10 (Special Condition A.4) Non-Standard Prohibited Discharges

Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 15048 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited. If a discharge to the Missouri River treatment plant is requested when the UV disinfection process is being utilized, ultraviolet transmittance must be analyzed and submitted to the District so an evaluation of the requested discharge can be made.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

D.12 (Special Condition B.2) Non-Standard Special Sampling and Analytical Procedures

Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

D.12 (Special Condition B.3) Non-Standard Special Sampling and Analytical Procedures

Discharge of Contaminated Storm Water

Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

E.12 (Special Condition C.4) Non-Standard Special Certification and Reporting Requirements

Materials exempt from Radioactive Discharge Reporting Requirements (non-NRC licensed materials only)

As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met.

E.12 (Special Condition C.5) Non-Standard Special Certification and Reporting Requirements

Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

E.12 (Special Condition C.6) Non-Standard Special Certification and Reporting Requirements

Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

F.4 (Special Condition D.1) Non-Standard Special Billing Reporting Requirements

Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 14395, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling **014** (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

F.4 (Special Condition D.4) Non-Standard Special Billing Reporting Requirements

BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

F.3 (Special Condition D.3) Reporting Non-Metered Water Consumption

Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

C.5 (Special Condition F.1) Non-Standard Derivation of Limitations

Volumetric Flow Rate Discharge Restrictions

The flow that is discharged from Bridgeton Landfill into the District Collection System at sample point 013 shall not:

- Exceed a 24 hour rolling average flow rate of 260 gallons per minute,
- Exceed a 4 hour rolling average flow rate of 290 gallons per minute,
- Exceed a maximum instantaneous flow rate of 500 gallons per minute,

unless otherwise approved by the District.

C.7 (Special Condition F.2) Hauled Waste Discharge Variance

Hauled Waste Variance Limit

All District Sewer Use Ordinance 15048 prohibitions and categorical pretreatment standards continue to apply. However, the specific ordinance limitations for individual pollutants shall not be applicable to approved hauled wastewaters, per Ordinance 15048 provisions for hauled waste variances, excepting pollutants specifically listed in the permit.



Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

August 3, 2017

Erin Fanning
Division Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: **Discharge Permit No: 1003803000 - 1.4**
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Ms. Fanning:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on December 01, 2016, for the above premise, is hereby revised as per the attached revised permit.

The following revisions were made to the permit:

- Removed the special condition for the maintenance and operation of the Westlake Pump Station.
- Added a special condition for the restriction of the discharge rate from Bridgeton Landfill. The flow restrictions are from the MSD's Operation and Maintenance SOP that was agreed upon by MSD and Bridgeton Landfill. There will be an instantaneous flow rate restriction of 500 gallons per minute.

We have reissued the entire permit for your convenience. Please replace your prior permit with this letter and the revised permit. The terms of the revised permit supersede your prior permit.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals.

This revision does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8721, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Chris Bulmahn

Chris Bulmahn
Associate Engineer

Enclosures: Industrial Wastewater Discharge Permit, Self-monitoring Report Form

cc: Doug Mendoza

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.4

EFFECTIVE DATE: August 01, 2017

EXPIRATION DATE: August 31, 2019

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2

SAMPLING PT. REF NUMBER(S): 013, 014

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT



Chris Bulmahn
Associate Engineer



Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Cooling Tower Blowdown + Plant & Equipment Washdown (Transfer station & jetter trucks) + Storm Water (Contaminated from leachate spills) + Condensate (Methane burnoff condensate) + Landfill Leachate (Including byproducts from underground thermal event)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/3 mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo
Transmittance Unfiltered	*****	Daily Avg	Once/3 mo
Ammonia (as N) [mg/L]	*****	Daily Avg	Once/3 mo
Gross Alpha [pci/L]	*****	Daily Avg	Once/3 mo
Gross Beta [pci/L]	*****	Daily Avg	Once/3 mo
Gross Gamma [pci/L]	*****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10000000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.77	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 014

SAMPLING POINT LOCATION: Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 0

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown (Transfer station & jetter trucks) + Landfill Leachate (Including byproducts from underground thermal event) + Condensate (Methane burnoff condensate)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	Once/3 mo
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	****	Instant	Once/3 mo
Temperature [Deg C]	****	Instant	Once/3 mo
pH [SU]	****	Instant	Once/3 mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10000000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Uranium (Total)	****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	****	Daily Avg	Once/3 mo
Benzene	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	****	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	****	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	****	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	****	Daily Avg	Once/3 mo
Silver (Total) [mg/L]	****	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	****	Daily Avg	Once/3 mo
Total Phenols [mg/L]	****	Instant	Once/3 mo
Total Toxic Organics [mg/L]	****	Instant	Once/3 mo

Permit No.: 1003803000 - 1.4
Page No.: 5
Effective Date: August 01, 2017

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** Monitoring requirement only

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

- a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.
- b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- a. All facility and sample description information required on the District's reporting form.
- b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- c. Daily flows, with dates, for all measurements or estimates made within the quarter.
- d. Any certification statements required pursuant to the Special Conditions in Section II.
- e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:

January 1 through March 31

April 1 through June 30

July 1 through September 30

October 1 through December 31

The report must be postmarked no later than:

April 28

July 28

October 28

January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by October 28, 2017.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:
- Any discharge from a new process or facility or a new source.
 - Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
 - Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
 - Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
 - Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
 - Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
 - Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to

continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 12559 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. On Site Discharge Prohibited Prior to District Approval of Pretreatment Plant

Discharge of wastewater through the onsite sewer (sampling point **013**) shall be prohibited prior to the District's declaration of acceptance of the permittee's pretreatment plant operational conditions.

A.2. Untreated or Partially-treated Hauled Discharge

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, only wastewater that has received normal pretreatment to prevent discharge prohibitions and has been discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there), is approved by this permit for hauling to District treatment plants and discharge. All other wastewater from the permitted facility that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District) must be approved for discharge separately by the District prior to hauling to District treatment plants and discharging.

Subsequent to the District's declaration of the permittee's pretreatment plant operational acceptance, for all wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point **013**, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - o Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - o Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - o Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.4. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 12559 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.5. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Sampling and Reporting Frequencies

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, the sampling frequency and acceptance procedure for the treated leachate discharge will follow the sampling parameters, frequency, and reporting requirements contained in the District's April 24, 2013 approval and subsequent modifications.

Following the District's declaration of plant acceptance, the permittee's discharge will be sampled for the parameters listed under sampling point 013 as follows:

1. Once/day for the first 30 calendar days. This sample of fully treated leachate may be collected from an internal sampling point prior to entry into the approved storage tank; however at least the final three samples must be collected from an approved tank.

2. At the end of the 30 day period, if analytical results are obtained for at least the final 7 consecutive days at or below the limits contained in the permit for onsite discharge, or in District Ordinance 12559 if not contained in the permit, sampling will continue on a once/week schedule for the next three months.

3. Should analytical results from once/week sampling meet the discharge limits for three consecutive months, sampling will continue at a once/month frequency for the following six months.

4. Should analytical results from once/month sampling meet the discharge limits for six consecutive months, sampling will continue at the frequencies defined in the permit.

Should a sample fail to meet the discharge limit for any parameter, the sampling frequency will revert to the next more frequent sampling interval listed above. Reversion to next more frequent sampling interval shall only apply to the parameter failing to meet its discharge limit. Reversion shall continue for the period specified for the initial sampling frequency reductions.

At least one of the initial once/day samples shall be analyzed for Gross Alpha, Gross Beta, Gross Gamma, Radium-226, Radium-228, and Uranium.

The sampling intervals listed above shall apply to the permittee's discharge regardless of discharge location to the District, whether on site or hauled.

Sample type and reporting frequency shall be as follows:

Sampling Frequency	Sample Type	Reporting Frequency
Once/day (12:00 am to 12:00 am)	Grab or 24-hr composite	Once/week. Reports shall be submitted by noon on each Wednesday and include all operational and laboratory reports received for activity through the previous Saturday.
Once/week (Sunday to Saturday)	24-hr composite	Once/week. Reports shall be submitted within 2 weeks (14 calendar days) of sampling.
Once/calendar month	24-hr composite	Once/month. Reports shall be submitted within 3 weeks (21 calendar days) of sampling.

All grab samples shall be collected in such a manner as to be as representative as possible of the full daily discharge.

This special condition does not relieve the permittee from any violations of the industrial wastewater discharge permit, nor District Ordinance 12559, nor any other applicable District ordinances. Neither does this special condition relieve the permittee from any other obligations of the industrial wastewater discharge permit, District Ordinance 12559, or any other applicable District ordinances.

B.4. Discharge of Contaminated Storm Water

Permittee is authorized to discharge storm water storm water contaminated with leachate to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.5. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point 013 (onsite) or sampling point 014 (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 011 (NPDES 006), or 012 (NPDES 007). These discharges are subject to State regulation under NPDES permit number MO-0112771. Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to special condition B.4. For storm water that is contaminated with material other than leachate, permittee is authorized to route it to the permittee's pretreatment plant, however should the permittee plan to route it directly to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.4. Materials exempt from Radioactive Discharge Reporting Requirements (non-NRC licensed materials only)

As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met.

C.5. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.6. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 13758, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling **014** (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **013**. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Variance Limits

Pursuant to the provisions of District Sewer Use Ordinance 12559, Article VI, Section Two, the permittee has been granted a variance to the Ordinance limitations for total arsenic at sampling point 013. The permittee shall comply with the alternative limits specified. The alternative limits are effective for the life of this permit but may be revoked at any time if it is determined that discharge at the variance levels is causing or contributing to interference or pass through as defined in Article II of the Ordinance. The variance will expire upon expiration of this permit unless justification for continuance of the alternative limits is provided by the permittee at the time of application for permit renewal.

Permit No.:	<u>1003803000 - 1.4</u>
Page No.:	<u>17</u>
Effective Date:	<u>August 01, 2017</u>

F.2. Volumetric Flow Rate Discharge Restrictions

The flow that is discharged from Bridgeton Landfill into the District Collection System at sample point **013** shall not:

- Exceed a 24 hour rolling average flow rate of 260 gallons per minute,
- Exceed a 4 hour rolling average flow rate of 290 gallons per minute,
- Exceed a maximum instantaneous flow rate of 500 gallons per minute

unless otherwise approved by the District.

THIS IS THE LAST PAGE OF THIS PERMIT

MSD 034421

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following.
Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

PART IV: GENERAL CERTIFICATION STATEMENTS

B. Certify discharge monitoring report & attachments

All permittees must sign and complete the information below:

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: _____

Title: _____ Telephone: _____

Signature: _____ Date: _____

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT REVISION

Company Name: BRIDGETON LANDFILL LLC

Premise Address: 13570 St. Charles Rock Road

Former Permit No: 1003803000 - 1.3

Original Effective Date: 12/1/2016

Revised Permit No: 1003803000 - 1.4

Revision Effective Date: 8/1/2017

WHY – Cite regulation, policy, etc. and identify any other documents which support the revision:

Per June 29, 2017 request from Bridgeton Landfill to make modifications to the permit. This is to remove language that is outdated and to reflect the most current conditions.

WHAT – Briefly explain what is to be revised and then list the pages & how affected:

Remove Special Condition B.5 with regards to the Westlake Pump Station air handling system.

Add flow restrictions for 24hr period, 4hr period and Instantaneous.

WHAT – List the Permit Preparation Checklist questions for which answers have changed from last permit, and complete those questions & attach the applicable checklist sheets:

No changes to specific questions form checklist.

Pg. # 1 New permit number and effective date
Pg. # 14 Remove Special Condition B.5 for Westlake Pump Station
Pg. # 17 Added Special Condition F.2 for flow rate restrictions
Pg. # _____
Pg. # _____

SMR Start Dates for any new requirements:

Once/3 mo: _____ or ☒ no new requirements
Once/6 mo: _____ or ☒ no new requirements
Once/year: _____ or ☒ no new requirements

SUPPORTING DOCUMENTS ATTACHED

	YES	NO	N/A
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Permit Preparation Checklist (Only the pages for Q's <u>8, 29</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pollutant & Limitations Documentation Sheets (for Sampling Points <u>013</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production-based Standards Calc. Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mass-based Standards Calc. Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Most Strict Limits Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Combined Wastestream Formula Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Text of any Customized Special Conditions: If Yes, for which SCs: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other: _____			

Prepared by: <u>Chris Bulmahn</u>	Date: <u>7/14/2017</u>
Reviewed by: <u>DMC</u>	Date: <u>8-3-17</u>

PERMIT NO: 1003803000 - 1.4

CHANGES TO

Special Certifications & General Reports for Special Conditions not tied to specific sample points

ADDITIONS: Special Conditions: # _____, # _____, # _____, # _____, # _____
Related SMR Certs: # _____, # _____, # _____, # _____, # _____
SMR Cert Frequency: [none], [none], [none], [none], [none]
Related General Rpt: _____, _____, _____, _____, _____
Gen Rpt Frequency: [none], [none], [none], [none], [none]

Are the ADDITIONAL SMR certs associated with first permit sample point (____)? YES ☐ NO ☒

DELETIONS: Special Conditions: # D.12, # _____, # _____, # _____, # _____
Related SMR Certs: # _____, # _____, # _____, # _____, # _____
Related General Rpt: _____, _____, _____, _____, _____

Were the DELETED SMR certs removed from the first permit sample point (____)? YES ☐ NO ☒

Check here if there are no changes to non-SP-specific Special Certifications or General Reports: ☐

SAMPLING POINT REFERENCE NUMBER: 013

Wastewater Components: _____

Flow Rate: _____ Units: _____

TYPE: Ord ☒ Cat ☐ Comb ☐NEW SP ☐ or CHANGE to SP ☒

Basis for Flow Rate: _____

FOR SPs WITH CHANGES, COMPLETE ONLY WHAT HAS CHANGED:

[illegible]

Special Condition:

List related SMR certs:
SMR cert frequency:

List related General Rpts:
General Rpt frequency:

Is this an Ord or Comb SP w/mon for Ord TTO and that has no TOs on site? YES ☐ NO ☐ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐ NO ☐

PERMIT PREPARATION CHECKLIST – PART 1
(Fact Sheet Attachment)

Company Name: _____

Permit No.: _____

Effective Date: _____

Prepared by: Chris Bulmahn

Date: 07/01/2015

REVIEW THE PRETREATMENT DATABASE (PIMS), INDUSTRY FILE AND PERMIT APPLICATION.
ANSWER THESE QUESTIONS & UPDATE THE DATABASE PRIOR TO DEVELOPING THE DRAFT PERMIT.

1. Are the correct SICs listed? Yes ☐ No ☐
If no, add _____ delete: _____
2. Is user in surcharge? Yes ☐ No ☐
If yes, date last certified: _____
If yes, Special Condition F.2 applies.
3. Does user's premise have more than one MSD account? Yes ☐ No ☐
If yes, were all account numbers correctly listed (including occupant #s)? Yes ☐ No ☐
If no, have account numbers been corrected in database before proceeding? Yes ☐ No ☐
4. Does user have a Return Factor (RF) other than 1.00 for any account? Yes ☐ No ☐
If yes, list acct no., RF and date last updated:
Acct _____ RF _____ Updated _____
Acct _____ RF _____ Updated _____
If yes, Special Condition F.1 applies.
5. Does user discharge water from a source not included in the MSD Billing system? Yes ☐ No ☐
If yes, Special Condition F.3 & General Report "Discharge Volume for Billing" apply.
If yes, Is a flow meter used to record the volume discharged from this other source? Yes ☐ No ☐
If yes, SC E.37 and Gen. Rpt. "Calibration of Discharge Flow Meter" apply.
If no, SC E.38 applies.
6. Have you established agreement among permit application, water consumption records and PIMS on component flows at each SP, total SP flows and total premise flow? Yes ☐ No ☐
If no, explain _____
7. Has user been granted any variances from ordinance limitations? Yes ☐ No ☐
If yes, Application Date: _____
Approval Date: _____, or approved as part of this permit issuance? Yes ☐
(Variances cannot last more than 5 years after approval)
If yes, Parameter(s) _____ at SP(s) _____
If yes, Special Condition C.4 applies.
8. Have any numerical limitations been applied to user, in addition to those already contained in the ordinance? Yes ☒ No ☐
If yes, Parameter(s) Flow Rate Discharge at SP(s) 013
Date limit(s) originally applied: 08/01/17, or as part of variance above? ☐
If yes, are Special Conditions, other than the standard special conditions, required? Yes ☒ No ☐
If yes, explain under "non-standard special conditions" question below.
9. Does user discharge any radioactive materials? Yes ☐ No ☐
If yes, Special Condition E.18 & General Report "Radiation Discharge" apply.
10. Does user generate wastes and/or wastewater by genetic engineering research? Yes ☐ No ☐
If yes, Special Condition B.12 applies.
11. Do all of the user's active connections, to MSD sewers, have identified SPs? Yes ☐ No ☐
If no, explain: _____
If no, is documentation sufficient to use Special Condition
E.5 ☐ "Sampling Not Required at Connections with NO SP and with SP on parts",
E.6 ☐ "Sampling Not Required at Connection with NO SP on it",
E.7 ☐ "Sampling Not Required at Connection with SP on only part of it", or
E.8 ☐ "Sampling Not Required at Permittee with No SP"?
If no, is compliance schedule necessary to obtain documentation? Yes ☐ No ☐
If yes, Special Condition G.1 is necessary.
12. Does premise require use of "upstream/downstream" sampling? Yes ☐ No ☐
If yes, Upstream SP # _____ & Downstream SP # _____
If yes, Special Conditions D.11 and E.9 apply.
13. Are there any inactive connections to MSD sewers? Yes ☐ No ☐
If yes, Special Condition E.10 applies.
14. Have you verified, in PIMS, the SP location descriptions are complete and adequate? Yes ☐ No ☐
15. Have you verified, in PIMS, the discharge components, process descriptions and related flows at all SPs, are complete and adequate? Yes ☐ No ☐



**Metropolitan St. Louis
Sewer District**

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

December 21, 2016

Erin Fanning
Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Discharge Permit No: 1003803000 - 1.3
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Ms. Fanning:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on September 1, 2014 and most recently revised on March 25, 2015, for the above premise, is hereby further revised as per the attached revised permit.

The following revisions were made to the permit:

- Addition of hydrogen-3 (tritium) monitoring requirement to sampling points 013 and 014, with a sampling frequency of once/3 months, and a monthly average discharge limit of 10,000,000 pci/L
- Addition of a special condition stating, "As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met."
- Effective date of December 1, 2016, with first report under this permit due by January 28, 2017

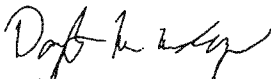
We have reissued the entire permit for your convenience. Please replace your prior permit with this letter and the revised permit. The terms of the revised permit supersede your prior permit.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals.

This revision does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8717, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT


Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosures: Industrial Wastewater Discharge Permit, Self-monitoring Report Form

cc: John Lodderhose
Chris Bulmahn
Ken Goins
Lance LeComb

PRIORITIES	PERFORMANCE	SERVICE
------------	-------------	---------

MSD 034427

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
HAULED & INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.3

EFFECTIVE DATE: December 1, 2016

EXPIRATION DATE: August 31, 2019

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 013, 014


In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.


Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT


Chris Bulmahn
Associate Engineer


Douglas M. Mendoza, P.E.
Mgt. of Industrial Pretreatment

DISCHARGE LIMITATIONS FOR ON SITE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate (Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown (Transfer station & jetter trucks) + Storm Water (Contaminated from leachate spills) + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/mo
Temperature [Deg C]	60	Instant	Once/mo
pH [SU]	11.5	Instant	Once/mo
pH [SU]	5.5	Instant	Once/mo
Transmittance Unfiltered	*****	Daily Avg	Once/mo
Ammonia (as N)	*****	Daily Avg	Once/3 mo
Gross Alpha	*****	Daily Avg	Once/3 mo
Gross Beta	*****	Daily Avg	Once/3 mo
Gross Gamma	*****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10,000,000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3,000	Monthly Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.77	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only

DISCHARGE LIMITATIONS FOR HAULED WASTE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 014

SAMPLING POINT LOCATION: Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate(Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown(Transfer station & jetter trucks)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/mo
Chemical Oxygen Demand	****	Daily Avg	Once/mo
Total Suspended Solids	****	Daily Avg	Once/mo
Temperature	****	Daily Avg	Once/mo
pH	****	Daily Avg	Once/mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10,000,000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3,000	Monthly Avg	Once/3 mo
Arsenic (Total)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total)	****	Daily Avg	Once/3 mo
Chromium (Total)	****	Daily Avg	Once/3 mo
Copper (Total)	****	Daily Avg	Once/3 mo
Iron (Total)	****	Daily Avg	Once/3 mo
Lead (Total)	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total)	****	Daily Avg	Once/3 mo
Nickel (Total)	****	Daily Avg	Once/3 mo
Oil and Grease (Total)	****	Daily Avg	Once/3 mo
Silver (Total)	****	Daily Avg	Once/3 mo
Zinc (Total)	****	Daily Avg	Once/3 mo
Total Phenols	****	Daily Avg	Once/3 mo
Total Toxic Organics	****	Daily Avg	Once/3 mo

Permit No.: 1003803000 - 1.2
Page No.: 5
Effective Date: December 1, 2016

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** Monitoring requirement only

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- a. All facility and sample description information required on the District's reporting form.
- b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- c. Daily flows, with dates, for all measurements or estimates made within the quarter.
- d. Any certification statements required pursuant to the Special Conditions in Section II.
- e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:

The report must be postmarked no later than:

January 1 through March 31

April 28

April 1 through June 30

July 28

July 1 through September 30

October 28

October 1 through December 31

January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by January 28, 2017.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:

- a. Any discharge from a new process or facility or a new source.
- b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
- c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
- d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
- e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
- f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
- g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written

report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and

shall abide by all of the provisions of District Ordinance 12559 and 13701 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559 and District Hauled Waste Ordinance 13701.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. On Site Discharge Prohibited Prior to District Approval of Pretreatment Plant

Discharge of wastewater through the on site sewer (sampling point **013**) shall be prohibited prior to the District's declaration of acceptance of the permittee's pretreatment plant operational conditions.

A.2. Untreated or Partially-treated Hauled Discharge

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, only wastewater that has received normal pretreatment to prevent discharge prohibitions and has been discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), is approved by this permit for hauling to District treatment plants and discharge. All other wastewater from the permitted facility that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District) must be approved for discharge separately by the District prior to hauling to District treatment plants and discharging.

Subsequent to the District's declaration of the permittee's pretreatment plant operational acceptance, for all wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point 014 (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.4. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 12559 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.5. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Sampling and Reporting Frequencies

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, the sampling frequency and acceptance procedure for the treated leachate discharge will follow the sampling parameters, frequency, and reporting requirements contained in the District's April 24, 2013 approval and subsequent modifications.

Following the District's declaration of plant acceptance, the permittee's discharge will be sampled for the parameters

listed under sampling point 013 as follows:

1. Once/day for the first 30 calendar days. This sample of fully treated leachate may be collected from an internal sampling point prior to entry into the approved storage tank; however at least the final three samples must be collected from an approved tank.
2. At the end of the 30 day period, if analytical results are obtained for at least the final 7 consecutive days at or below the limits contained in the permit for on site discharge, or in District Ordinance 12559 if not contained in the permit, sampling will continue on a once/week schedule for the next three months.
3. Should analytical results from once/week sampling meet the discharge limits for three consecutive months, sampling will continue at a once/month frequency for the following six months.
4. Should analytical results from once/month sampling meet the discharge limits for six consecutive months, sampling will continue at the frequencies defined in the permit.

Should a sample fail to meet the discharge limit for any parameter, the sampling frequency will revert to the next more frequent sampling interval listed above. Reversion to next more frequent sampling interval shall only apply to the parameter failing to meet its discharge limit. Reversion shall continue for the period specified for the initial sampling frequency reductions.

At least one of the initial once/day samples shall be analyzed for Gross Alpha, Gross Beta, Gross Gamma, Radium-226, Radium-228, and Uranium.

The sampling intervals listed above shall apply to the permittee's discharge regardless of discharge location to the District, whether on site or hauled.

Sample type and reporting frequency shall be as follows:

Sampling Frequency	Sample Type	Reporting Frequency
Once/day (12:00 am to 12:00 am)	Grab or 24-hr composite	Once/week. Reports shall be submitted by noon on each Wednesday and include all operational and laboratory reports received for activity through the previous Saturday.
Once/week (Sunday to Saturday)	24-hr composite	Once/week. Reports shall be submitted within 2 weeks (14 calendar days) of sampling.
Once/calendar month	24-hr composite	Once/month. Reports shall be submitted within 3 weeks (21 calendar days) of sampling.

All grab samples shall be collected in such a manner as to be as representative as possible of the full daily discharge.

This special condition does not relieve the permittee from any violations of the industrial wastewater discharge permit, nor District Ordinance 12559, nor any other applicable District ordinances. Neither does this special condition relieve the permittee from any other obligations of the industrial wastewater discharge permit, District Ordinance 12559, or any other applicable District ordinances.

B.4. Discharge of Contaminated Storm Water

Permittee is authorized to discharge contaminated storm water to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.5. Operation of Westlake Pump Station Air Handling Equipment

Permittee shall continue to maintain and operate the air ventilation, scrubber and 4-gas meter system installed at the District's Westlake Pump Station during discharge of leachate to the pump station. The permittee may suspend operation during cessation of discharge to the pump station. Upon resumption of discharge to the pump station, operation of the air equipment must resume immediately.

B.6. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point 013 (on site) or sampling point 014 (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 011 (NPDES 006), or 012 (NPDES 007). These discharges are subject to State regulation under NPDES permit number MO-0112771. Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to special condition B.4. For storm water that is contaminated with material other than leachate, permittee is authorized to route it to the permittee's pretreatment plant, however should the permittee plan to route it directly to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.4. Materials exempt from Radioactive Discharge Reporting Requirements
(non-Nuclear Regulatory Commission licensed materials only)

As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met.

C.5. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.6. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 13758, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling 014 (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 013. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly

volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Variance Limits

Pursuant to the provisions of District Sewer Use Ordinance 12559, Article VI, Section Two, the permittee has been granted a variance to the Ordinance limitations for total arsenic at sampling point 013. The permittee shall

Permit No.:	1003803000 - 1.2
Page No.:	17
Effective Date:	December 1, 2016

comply with the alternative limits specified. The alternative limits are effective for the life of this permit but may be revoked at any time if it is determined that discharge at the variance levels is causing or contributing to interference or pass through as defined in Article II of the Ordinance. The variance will expire upon expiration of this permit unless justification for continuance of the alternative limits is provided by the permittee at the time of application for permit renewal.

THIS IS THE LAST PAGE OF THIS PERMIT

INDUSTRIAL USER SELF MONITORING REPORT PAGE 2

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following.
Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

O	NO DISCHARGE OF HAZARDOUS HAULED WASTE For permit special conditions that prohibit discharge of hazardous waste to the District, you are required to make the following certification: _____ I certify, since the last discharge monitoring report, there has been no discharge of hazardous waste to the District.
---	--

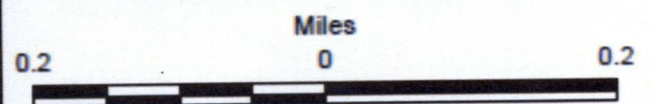
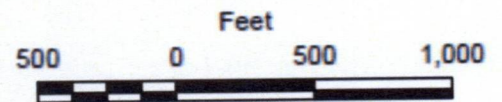
PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION All permittees must sign and complete the information below: I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Print or type name of signing official: _____ Title: _____ Telephone: _____ Signature: _____ Date: _____
---	--



Legend

- NPDES Outfalls
- MSD Outfalls



**BRIDGETON LANDFILL
NPDES and MSD Discharge Locations**

9/02/2014



Doug Mendoza

Permit file

From: Doug Mendoza
Sent: Tuesday, December 20, 2016 2:22 PM
To: 'Fanning, Erin'
Subject: RE: Revised Draft Modified Permit for Bridgeton Landfill

Okay, thank you. We will correct that.

From: Fanning, Erin [mailto:EFanning@republicservices.com]
Sent: Tuesday, December 20, 2016 1:34 PM
To: Doug Mendoza
Subject: RE: Revised Draft Modified Permit for Bridgeton Landfill

Good afternoon Doug,

I wanted to follow up with you as there was just a typographical error noted in the revised draft modified permit email below. Please note that under General Condition 9, the date of the first report should be January 28, 2017, instead of 2016 as the effective date of the revision is December 1, 2016. With that change, Bridgeton Landfill agrees with these proposed modifications and has no further comments to offer.

Please do feel free to contact me on cell if you have any questions regarding this comment. Thank you very much for your time, and please do not hesitate to contact me with any questions.

Kindest regards,

Erin Fanning
Division Manager

Bridgeton Landfill, LLC.
13570 Saint Charles Rock Road
Bridgeton, MO 63044
Cell: (209) 227-9531

From: Fanning, Erin
Sent: Tuesday, December 20, 2016 11:33 AM
To: 'Doug Mendoza'
Subject: RE: Revised Draft Modified Permit for Bridgeton Landfill

Good morning Doug,

We have no comments on the revised draft modified permit. Thank you for the opportunity to review.

Thank you very much for your time, have a great holiday week, and please do not hesitate to contact me with any questions.

Kindest regards,

Erin Fanning
Division Manager

Bridgeton Landfill, LLC.
13570 Saint Charles Rock Road
Bridgeton, MO 63044
Cell: (209) 227-9531



**Metropolitan St. Louis
Sewer District**

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

December 7, 2016

Erin Fanning
Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Discharge Permit No: 1003803000 - 1.3 (Revised Draft Modification)
For premise at: 13570 St. Charles Rock Road
Bridgeton, MO 63044

Dear Ms. Fanning:

The Metropolitan St. Louis Sewer District has completed its review of Bridgeton Landfill's response to its draft modified Industrial Wastewater Discharge Permit for the above premise. The draft modified permit added a monitoring requirement for hydrogen-3 (tritium), with a monthly average discharge limit of 10,000,000 pci/L. You requested that a clarification also be added to exempt tritium for the total radioactive materials limit contained in special condition C.3.

MSD accepts your desire to address a tritium exemption for the total radioactive materials limit. However, we do not believe it is appropriate to add a blanket exemption for tritium from the permit special condition for "Radioactive Discharge Reporting Requirements." Rather, a special condition adding an exemption for those materials specified in 19 CSR 20-10.020(1)(A) is appropriate.

This added special condition addresses Bridgeton Landfill's concern over data regarding self-luminous elements (one of the materials described in the CSR) commonly disposed in landfills and contributing tritium to landfill leachate. It also avoids an exemption for tritium beyond that authorized by 19 CSR 20-10.020 and 19 CSR 20-10.040.

The following additional modification is being made to the permit:

- Addition of a special condition stating, "As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met."

The original modifications made to the permit also will remain:

- Addition of hydrogen-3 (tritium) monitoring requirement to sampling points 013 and 014, with a sampling frequency of once/3 months, and a monthly average discharge limit of 10,000,000 pci/L
- Effective date of December 1, 2016, with first report under this permit due by January 28, 2016

We have included the entire new draft modified permit for your convenience.

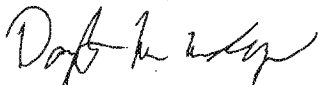
This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

Please review this revised draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 days of receipt. MSD will deem absence of a response within this period as acceptance of the revised draft modified permit, and we will proceed to issue the final modified permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8717, if you have any questions.

Sincerely,

METROPOLITAN ST. LOUIS SEWER DISTRICT



Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosure: Revised Draft Modified Industrial Wastewater Discharge Permit

cc: John Lodderhose
Chris Bulmahn
Ken Goins
Lance LeComb

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
HAULED & INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.3

EFFECTIVE DATE: December 1, 2016
EXPIRATION DATE: August 31, 2019

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 013, 014

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Chris Bulmahn
Associate Engineer

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS FOR ON SITE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate (Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown (Transfer station & jetter trucks) + Storm Water (Contaminated from leachate spills) + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	***	Daily Avg	Once/mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/mo
Temperature [Deg C]	60	Instant	Once/mo
pH [SU]	11.5	Instant	Once/mo
pH [SU]	5.5	Instant	Once/mo
Transmittance Unfiltered	*****	Daily Avg	Once/mo
Ammonia (as N)	*****	Daily Avg	Once/3 mo
Gross Alpha	*****	Daily Avg	Once/3 mo
Gross Beta	*****	Daily Avg	Once/3 mo
Gross Gamma	*****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10,000,000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3,000	Monthly Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.77	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only

REVISED DRAFT

DISCHARGE LIMITATIONS FOR HAULED WASTE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 014

SAMPLING POINT LOCATION: Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate(Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown(Transfer station & jetter trucks)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/mo
Chemical Oxygen Demand	****	Daily Avg	Once/mo
Total Suspended Solids	****	Daily Avg	Once/mo
Temperature	****	Daily Avg	Once/mo
pH	****	Daily Avg	Once/mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10,000,000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3,000	Monthly Avg	Once/3 mo
Arsenic (Total)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total)	****	Daily Avg	Once/3 mo
Chromium (Total)	****	Daily Avg	Once/3 mo
Copper (Total)	****	Daily Avg	Once/3 mo
Iron (Total)	****	Daily Avg	Once/3 mo
Lead (Total)	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total)	****	Daily Avg	Once/3 mo
Nickel (Total)	****	Daily Avg	Once/3 mo
Oil and Grease (Total)	****	Daily Avg	Once/3 mo
Silver (Total)	****	Daily Avg	Once/3 mo
Zinc (Total)	****	Daily Avg	Once/3 mo
Total Phenols	****	Daily Avg	Once/3 mo
Total Toxic Organics	****	Daily Avg	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** Monitoring requirement only

REVISED DRAFT

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- All facility and sample description information required on the District's reporting form.
- Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- Daily flows, with dates, for all measurements or estimates made within the quarter.
- Any certification statements required pursuant to the Special Conditions in Section II.
- Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:

January 1 through March 31

April 1 through June 30

July 1 through September 30

October 1 through December 31

The report must be postmarked no later than:

April 28

July 28

October 28

January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by January 28, 2016.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:

- a. Any discharge from a new process or facility or a new source.
- b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
- c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
- d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
- e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
- f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
- g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written

report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and

shall abide by all of the provisions of District Ordinance 12559 and 13701 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559 and District Hauled Waste Ordinance 13701.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. On Site Discharge Prohibited Prior to District Approval of Pretreatment Plant

Discharge of wastewater through the on site sewer (sampling point **013**) shall be prohibited prior to the District's declaration of acceptance of the permittee's pretreatment plant operational conditions.

A.2. Untreated or Partially-treated Hauled Discharge

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, only wastewater that has received normal pretreatment to prevent discharge prohibitions and has been discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), is approved by this permit for hauling to District treatment plants and discharge. All other wastewater from the permitted facility that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District) must be approved for discharge separately by the District prior to hauling to District treatment plants and discharging.

Subsequent to the District's declaration of the permittee's pretreatment plant operational acceptance, for all wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point 014 (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.4. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 12559 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.5. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Sampling and Reporting Frequencies

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, the sampling frequency and acceptance procedure for the treated leachate discharge will follow the sampling parameters, frequency, and reporting requirements contained in the District's April 24, 2013 approval and subsequent modifications.

Following the District's declaration of plant acceptance, the permittee's discharge will be sampled for the parameters

listed under sampling point 013 as follows:

1. Once/day for the first 30 calendar days. This sample of fully treated leachate may be collected from an internal sampling point prior to entry into the approved storage tank; however at least the final three samples must be collected from an approved tank.
2. At the end of the 30 day period, if analytical results are obtained for at least the final 7 consecutive days at or below the limits contained in the permit for on site discharge, or in District Ordinance 12559 if not contained in the permit, sampling will continue on a once/week schedule for the next three months.
3. Should analytical results from once/week sampling meet the discharge limits for three consecutive months, sampling will continue at a once/month frequency for the following six months.
4. Should analytical results from once/month sampling meet the discharge limits for six consecutive months, sampling will continue at the frequencies defined in the permit.

Should a sample fail to meet the discharge limit for any parameter, the sampling frequency will revert to the next more frequent sampling interval listed above. Reversion to next more frequent sampling interval shall only apply to the parameter failing to meet its discharge limit. Reversion shall continue for the period specified for the initial sampling frequency reductions.

At least one of the initial once/day samples shall be analyzed for Gross Alpha, Gross Beta, Gross Gamma, Radium-226, Radium-228, and Uranium.

The sampling intervals listed above shall apply to the permittee's discharge regardless of discharge location to the District, whether on site or hauled.

Sample type and reporting frequency shall be as follows:

Sampling Frequency	Sample Type	Reporting Frequency
Once/day (12:00 am to 12:00 am)	Grab or 24-hr composite	Once/week. Reports shall be submitted by noon on each Wednesday and include all operational and laboratory reports received for activity through the previous Saturday.
Once/week (Sunday to Saturday)	24-hr composite	Once/week. Reports shall be submitted within 2 weeks (14 calendar days) of sampling.
Once/calendar month	24-hr composite	Once/month. Reports shall be submitted within 3 weeks (21 calendar days) of sampling.

All grab samples shall be collected in such a manner as to be as representative as possible of the full daily discharge.

This special condition does not relieve the permittee from any violations of the industrial wastewater discharge permit, nor District Ordinance 12559, nor any other applicable District ordinances. Neither does this special condition relieve the permittee from any other obligations of the industrial wastewater discharge permit, District Ordinance 12559, or any other applicable District ordinances.

B.4. Discharge of Contaminated Storm Water

Permittee is authorized to discharge contaminated storm water to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.5. Operation of Westlake Pump Station Air Handling Equipment

Permittee shall continue to maintain and operate the air ventilation, scrubber and 4-gas meter system installed at the District's Westlake Pump Station during discharge of leachate to the pump station. The permittee may suspend operation during cessation of discharge to the pump station. Upon resumption of discharge to the pump station, operation of the air equipment must resume immediately.

B.6. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point 013 (on site) or sampling point 014 (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 011 (NPDES 006), or 012 (NPDES 007). These discharges are subject to State regulation under NPDES permit number MO-0112771. Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to special condition B.4. For storm water that is contaminated with material other than leachate, permittee is authorized to route it to the permittee's pretreatment plant, however should the permittee plan to route it directly to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.4. Materials exempt from Radioactive Discharge Reporting Requirements
(non-Nuclear Regulatory Commission licensed materials only)

As specified in Missouri State Regulation 19 CSR 20-10.020, discharges from timepieces, instruments, novelties or devices containing self-luminous elements themselves are exempt from inclusion in the summation under the Radioactive Discharge Reporting Requirements, so long as all other conditions of 19 CSR 20-10 regarding these materials are met.

C.5. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.6. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 13758, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling 014 (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 013. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly

volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength, and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Variance Limits

Pursuant to the provisions of District Sewer Use Ordinance 12559, Article VI, Section Two, the permittee has been granted a variance to the Ordinance limitations for total arsenic at sampling point 013. The permittee shall

comply with the alternative limits specified. The alternative limits are effective for the life of this permit but may be revoked at any time if it is determined that discharge at the variance levels is causing or contributing to interference or pass through as defined in Article II of the Ordinance. The variance will expire upon expiration of this permit unless justification for continuance of the alternative limits is provided by the permittee at the time of application for permit renewal.

THIS IS THE LAST PAGE OF THIS PERMIT

REVISED DRAFT

INDUSTRIAL USER SELF MONITORING REPORT PAGE 2

PART III: SPECIAL CERTIFICATION STATEMENTS

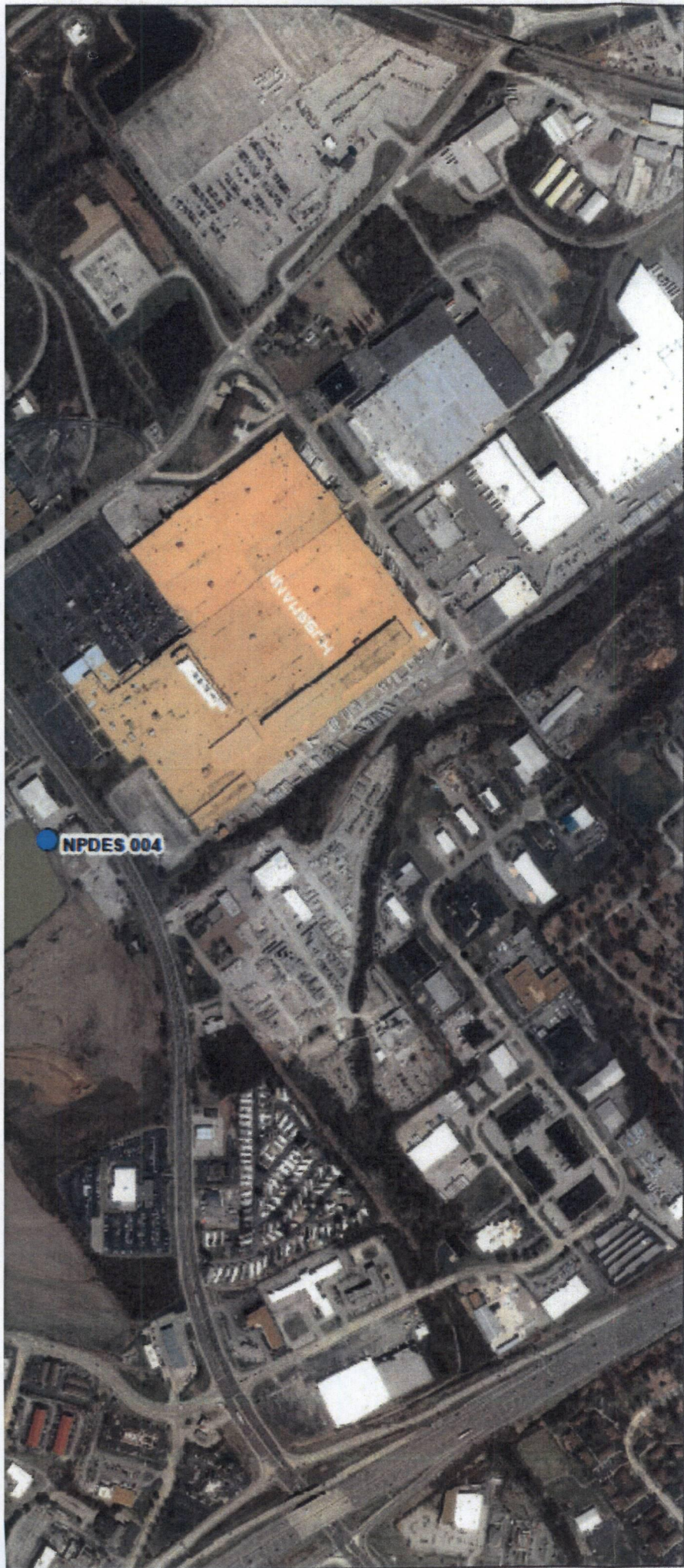
Based on the special conditions contained in your discharge permit you may be required to certify the following.
Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

<input type="radio"/>	NO DISCHARGE OF HAZARDOUS HAULED WASTE For permit special conditions that prohibit discharge of hazardous waste to the District, you are required to make the following certification: _____ I certify, since the last discharge monitoring report, there has been no discharge of hazardous waste to the District.
-----------------------	--

PART IV: GENERAL CERTIFICATION STATEMENTS

<input type="checkbox"/>	DISCHARGE MONITORING REPORT CERTIFICATION All permittees must sign and complete the information below: I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Print or type name of signing official: _____ Title: _____ Telephone: _____ Signature: _____ Date: _____
--------------------------	--

REVISED

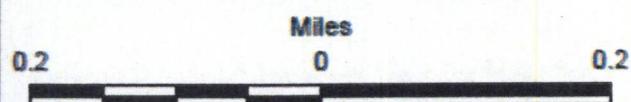
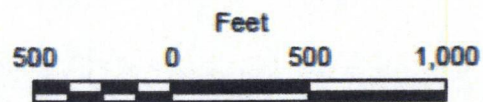


1



Legend

- NPDES Outfalls
- MSD Outfalls



BRIDGETON LANDFILL NPDES and MSD Discharge Locations

9/02/2014

2

Document Path: I:\Projects\2018\111714\Maps\Output\Map 9-02-14.mxd



of five centimeters (5 cm) from any point on the surface of the housing accessible to the patient cannot exceed the rate of thirty (30) roentgens per hour when the tube is operated at its maximum current and voltage.

(31) Useful beam is that part of radiation which passes through the window, aperture, cone or collimating device of the tube housing.

(32) User is a person having administrative control over one (1) or more sources.

(33) Other scientific and technical terms not specifically defined in this rule shall be used in accordance with the definitions in recommendations of the National Committee on Radiation Protection and Measurements as published in *Handbooks of the National Bureau of Standards* or the American Standard Association's *Glossary of Terms in Nuclear Science and Technology*, with preference being in the order given.

AUTHORITY: section 192.420, RSMo 1986.*
This rule was previously filed as 13 CSR 50-90.010. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.020 Exemptions from Requirements of this Chapter

PURPOSE: This rule lists exemptions from the requirements of this chapter. It avoids unnecessary regulation and duplication of regulatory authority.

(1) The following materials, machines and conditions are exempt from the requirements of this chapter:

(A) Timepieces, instruments, novelties or devices containing self-luminous elements themselves. These timepieces, instruments, novelties or devices shall not be exempt if they are stored, used or handled in a quantity or fashion that an individual might receive a radiation dose exceeding the limits established in 19 CSR 20-10.040;

(B) Electrical equipment that produces radiation incidental to its operation for other purposes, providing the dose rate to the whole body at the point of nearest approach to this equipment when any external shielding is removed does not exceed 0.5 rem per year. The production testing or factory servicing of this equipment shall not be exempt;

(C) Radiation machines which cannot be used in a manner as to produce radiation (for

example, X-ray machines or electrical equipment in storage or transport);

(D) Radioactive material being transported across a state in conformance with regulations of any federal agency having jurisdiction over safety in interstate transport;

(E) The use of radioactive sources licensed by the United States Nuclear Regulatory Commission to installations in Missouri; and

(F) Other sources of radiation that the department finds should be exempted as approved by the Committee on Radiation Control.

AUTHORITY: section 192.420, RSMo 1986.*
This rule was previously filed as 13 CSR 50-90.020. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.030 Registration of Sources of Ionizing Radiation

PURPOSE: This rule states the conditions under which sources of ionizing radiation must be registered with the department.

(1) The owner, user or operator of every existing not exempted source shall register the source of radiation with the department within ninety (90) days (March 9, 1965) after the effective date of this rule (December 9, 1964) and once every two (2) years after that as long as s/he continues to possess the source. Any newly acquired source shall be registered with the Department of Health within thirty (30) days after receipt. The registration shall be submitted on a form available from the department and shall describe each source, its location and use and the waste disposal practices, if any. The registration also shall give the name and address of the user(s) and the name and address of the qualified expert.

(2) The user shall notify the department in writing within thirty (30) days of any change with respect to his/her radiation sources which may substantially increase or decrease the potential for personnel exposure.

(3) All nonexempt radiation sources brought into Missouri for temporary use must be registered at least four (4) days before entry. The registration shall indicate the type and amount of the source, the scope of the use, duration of use and the exact locations of the use or storage. This requirement may be waived at the discretion of the Department of Health if the use is an unexpected occurrence of major consequence demanding immediate

use and of which it would not have been possible to have knowledge four (4) days in advance.

(4) An installation registration may be issued, on application, for research institutions, teaching institutions and certain manufacturing establishments whose radiation conditions are undergoing constant change. These institutions and manufacturing establishments must maintain an active and effective radiation committee to review and approve all uses of radiation sources. A qualified expert must be retained to make hazard evaluations of all uses of all radiation sources and must be given authority to enforce recommended procedures.

(5) Registration shall not imply the department's approval of the conditions described in the registration.

AUTHORITY: section 192.420, RSMo 1986.*
This rule was previously filed as 13 CSR 50-90.030. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.040 Maximum Permissible Exposure Limits

PURPOSE: This rule establishes maximum permissible exposure limits. Maximum permissible doses are established for both external and internal exposures for persons within or outside controlled areas.

(1) Except as provided in subsections (1)(A)-(C) of this rule, the maximum permissible dose (MPD) from all external sources of ionizing radiation for persons within a controlled area shall be as listed in Table I.

Table I

Part of Body	A Maximum dose permitted in any calendar year	B Maximum dose permitted in any calendar quarter
Whole body, head and trunk, major portion of the bone marrow, gonads or lens of eye	5 rems	3 rems
Skin of large body area	30 rems	10 rems
Hands and forearms, feet and ankles	75 rems	25 rems

A dose to the whole body, head and trunk, in addition to that listed in Table I, shall be permitted for a calendar year, provided that all three (3) of the following conditions are met:

(A) During any calendar quarter, the maximum dose of three (3) rems, listed in Column B of Table I, is not exceeded;

(B) The user has determined the individual's previous accumulated occupational dose; and

(C) The dose, when added to the previously accumulated occupational dose, does not exceed the maximum permissible accumulated dose (MPAD) calculated according to the formula: $MPAD = (N-18) \times 5$ rems, where N is the individual's age in full years.

(2) For persons within a controlled area, the radiation dose to the tissues of the body from radioactive materials within the body shall be controlled by limiting the average rates at which these materials are taken into the body. Where this intake results from breathing contaminated air, the concentrations of the radionuclides in the air, averaged over any calendar quarter, shall not exceed the concentrations listed in Appendix I, Table 2, Column 1 of this chapter. The values in this table are for a workweek of forty (40) hours. For longer workweeks, the values must be adjusted downward accordingly. Where this intake results from the occurrence of radioactive material in drinking water and foodstuffs, the permissible concentrations shall be the same as in section (3) of this rule.

(3) For persons outside a controlled area, the MPD to the whole body due to sources within the controlled area or to radioactive materials escaping from the controlled area, shall be two (2) millirems in any one (1) hour, 0.1 rem in any seven (7) consecutive days and 0.5 rem in any year. In meeting this requirement, the user may take reasonable advantage of operational factors such as the amount of time that the radiation is present or that the area is occupied by any one (1) person.

(4) For persons outside a controlled area, the radiation dose to tissues of the body from radioactive materials within the body shall be controlled by limiting the average rates at which the materials are taken into the body. Where this intake results from the occurrence of radioactive materials in the air, drinking water or foodstuffs, the average concentrations of the radionuclides in the air or drinking water or foodstuffs, averaged over any calendar quarter, shall not exceed the concentrations listed in Appendix I, Table 2, Columns 2 and 3 of this chapter.

AUTHORITY: section 192.420, RSMo 1986.* This rule was previously filed as 13 CSR 50-90.040. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.050 Personnel Monitoring and Radiation Surveys

PURPOSE: This rule lists requirements for personnel monitoring and radiation surveys. Conditions under which routine monitoring of individuals occupationally exposed to radiation shall not be required are also listed.

(1) The user shall provide for radiation surveys and monitoring sufficient to assure compliance with other rules of this chapter. The radiation survey and monitoring shall be performed by, or under the direction of, a qualified expert using suitable instruments and methods for measuring radiation.

(2) Until an actual radiation survey can be performed, a written statement made by a qualified expert based on his/her analysis of the situation shall be acceptable as evidence of the absence of radiation hazard in a given area.

(3) Personnel monitoring shall be required for each individual for whom there is any reasonable possibility of receiving a weekly dose of all radiation exceeding fifty (50) millirems, taking into consideration the use of protective gloves, aprons or other radiation-limiting devices.

(4) Routine monitoring of individuals occupationally exposed to radiation from radiation machines shall not be required if—

(A) A qualified expert has specified the operating conditions under which there is no reasonable chance that any individual will be subjected to a dose of either more than twenty-five (25) millirems in any seven (7) consecutive days or more than three hundred twenty-five (325) millirems in any thirteen (13) consecutive weeks;

(B) The operating conditions in subsection (4)(A) of this rule are made known to all individuals who may be occupationally exposed to the radiation; and

(C) The installation continues to operate only under the specified conditions.

(5) Radiation surveys of sealed sources and sealed storage areas shall be made at least semiannually to insure the integrity of the containment. The survey shall be capable of detecting the presence of 0.005 microcurie of removable contamination. If the survey reveals the presence of 0.005 microcurie or more of removable contamination, the user shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired, or disposed of, in accordance with procedures established by a qualified expert.

dance with procedures established by a qualified expert.

AUTHORITY: section 192.420, RSMo 1986.* This rule was previously filed as 13 CSR 50-90.050. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 194.420, RSMo 1963.

19 CSR 20-10.060 Radiation Exposure Records and Reports

PURPOSE: This rule requires the user of radiation sources to keep records of personnel exposures, radiation measurements and the receipt and disposal of radioactive materials. It also states the conditions under which personnel exposures and radiation incidents must be reported.

(1) Records of all measurements required by 19 CSR 20-10.050 shall be kept available by the user for inspection by a representative of the department. Personnel monitoring records shall include the Social Security number and date of birth of the individual concerned.

(2) An accurate accounting for all radioactive materials, not specifically exempted by 19 CSR 20-10.020, shall be maintained. The records shall show the amount of radioactive material received, transferred, decayed in storage and disposed of and other information as may be necessary to account for the difference between the amount of radioactive material received or produced and the amount on hand. The user shall also keep records of the release of radioactive materials to the environs sufficient to demonstrate compliance with other rules of this chapter. The records shall be maintained and made available for inspection for at least five (5) years after final disposition of the radioactive material.

(3) Upon termination of employment of an individual, the individual or department, or both, upon request, shall be supplied with a summary statement of that individual's radiation dose. (The estimated maximum dose shall be stated if no personnel monitoring has been carried out.) This record shall include statements of any circumstances where the dose to the employee from any source of radiation exceeded those specified in this chapter. Employee records must be kept available for inspection by the department during the tenure of employment of an employee and for a period of five (5) years after that.

(4) When it is known or believed that an accidental dose to a person in the installation may have exceeded two (2) times the amount permitted by applicable sections of 19 CSR 20-10.040, all facts relative to the occurrence shall be reported in detail to the department within seven (7) days of the discovery of the facts, and a copy of the report shall be put in that individual's personnel file. The cause of the overexposure shall immediately be sought out and corrected.

(5) The loss or theft of any source of radiation not exempt from these rules shall be reported immediately to the department by telephone and a written report shall be submitted within twenty-four (24) hours.

(6) At the request of any employee, each user shall advise the employee annually of the employee's exposure to radiation as shown in records maintained by the user.

(7) Any accident involving either a public or private carrier conveying radioactive material shall be reported immediately to the Department of Health by telephone and a written report shall be submitted within twenty-four (24) hours.

AUTHORITY: section 192.420, RSMo 1986.*
This rule was previously filed as 13 CSR 50-90.060. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.070 Storage of Radioactive Materials

PURPOSE: This rule requires the safe storage of radioactive material.

(1) The user shall see that radioactive materials are kept in a manner that will provide reasonable assurance that, during routine access to a controlled area, no person will be exposed in excess of the limits set forth in 19 CSR 20-10.040. Provisions shall be made to minimize the hazard to emergency workers in the event of fire and in situations where earthquake, flood and windstorm potentials exist.

(2) The user shall see that vaults or rooms used for storing materials that may emit radioactive gases or airborne particulate matter are ventilated in a manner that the concentration of the gases or particulate matter in the air does not constitute a radiation hazard.

(3) When there is a reasonable possibility that chemical, radiation or other action might lead to leakage of radioactive material from a container, the user shall provide a secondary tray or catchment to the container adequate to retain the entire amount of radioactive material.

AUTHORITY: section 192.420, RSMo 1986.*
This rule was previously filed as 13 CSR 50-90.070. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.080 Control of Radioactive Contamination

PURPOSE: This rule limits personnel exposure by requiring the control or removal of radioactive contamination.

(1) The user shall see that all work with radioactive materials is carried out under conditions which will minimize the possibility of spread of radioactive material that could result in the exposure of any person above any limit specified in 19 CSR 20-10.040.

(2) Where the nature of work is such that a person or his/her clothing may become contaminated with radioactive material, both shall be monitored according to procedures established by a qualified expert. Personal contamination shall be removed according to procedures established by a qualified expert.

(3) Clothing or other material contaminated to a degree which could result in the exposure of any person above any limit specified in 19 CSR 20-10.040 should be retained inside the installation until it can be decontaminated or disposed of according to procedures established by a qualified expert.

AUTHORITY: section 192.420, RSMo 1986.*
This rule was previously filed as 13 CSR 50-90.080. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.090 Disposal of Radioactive Wastes

PURPOSE: This rule lists the conditions under which radioactive material may be released into the air or water or may be disposed of by burial in soil or discharged into a sanitary sewer.

(1) No user shall release radioactive material into the air or water in a manner which causes exposure of any person above the limits specified in 19 CSR 20-10.040. If several users are discharging radioactive wastes to the same environs, they shall cooperate in limiting the release and shall file with the Department of Health a statement of their agreed *pro rata* releases.

(2) Every person who receives radioactive waste material for holding and preparation, prior to disposal, shall first obtain a permit from the Department of Health for the holding and preparation.

(3) No owner or user shall dispose of radioactive waste materials by dumping or burial in soil except at sites approved by and registered with the Department of Health.

(4) Radioactive material may be discharged into a sanitary sewer provided that the—

(A) Material is readily soluble or dispersible in water;

(B) Quantity of any radioactive material released into the sewer in any one (1) day, when diluted by the average daily quantity of sewerage released into the sewer by the owner or user, will not result in average concentration exceeding the limits specified in Table 2, Appendix I of this chapter; and

(C) Gross quantity of all radioactive material so discharged does not exceed one (1) curie per year.

AUTHORITY: section 192.420, RSMo 1986.*
This rule was previously filed as 13 CSR 50-90.090. Original rule filed Nov. 9, 1964, effective Dec. 9, 1964.

*Original authority: 192.420, RSMo 1963.

19 CSR 20-10.100 Radiation Labeling

PURPOSE: This rule establishes requirements for labeling radiation machines, radiation areas and containers in which radioactive materials are transferred, stored or used and to list exemptions from posting or labeling requirements.

(1) The user shall indicate the presence of radiation by posting conspicuous signs or labels which bear appropriate wording, as described in sections (5)-(10) of this rule to explain the nature of the hazard.

(2) All such radiation warning signs and labels shall bear the standard symbol for designating any radiation hazard as described in Appendix II of this chapter.



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

MO.gov

Governor Jay Nixon

Find an A

Programs ▾

Forms and Permits

Publications

Laws and Regulations

Environmental Geology Section

⬆ » **Geology » Geological Survey » Environmental Geology Section**

Staff Directory

Any general questions or comments for employees may be emailed directly
to the **Environmental Geology Section** or call 573-368-2161.

Carey Bridges
Program Director
573-368-7152

Peter Price
Section Chief
573-368-2131

Rhonda Wilks
Section Secretary
573-368-2161

Subsurface Investigations and Waste Management Unit

Glen Young
Unit Chief, Geologist IV
573-368-2333

Terry Hawkins
Geologist III
573-368-2164

Peter Bachle
Geologist II
573-368-2472

Brenna McDonald
Geologist II
573-368-2163

Fred Shaw
Technical Assistant III
573-368-2479

John Pate
Geologist II
573-368-2148

Dan Nordwald
Technical Assistant IV
573-368-2451

Environmental Assistance Unit

Vacant
Unit Chief, Geologist IV

Fletcher Bone
Geologist II
573-368-2183

Jeremiah Jackson
Geologist I
573-368-2182

Environmental Geology Section

Staff Directory

Any general questions or comments for employees may be emailed directly
to the **Environmental Geology Section** (<mailto:gspeg@dnr.mo.gov>) or call 573-368-2161.

Carey Bridges (<mailto:carey.bridges@dnr.mo.gov>)

Program Director
573-368-7152

Peter Price (<mailto:peter.price@dnr.mo.gov>)

Section Chief
573-368-2131

Rhonda Wilks (<mailto:rhonda.wilks@dnr.mo.gov>)

Section Secretary
573-368-2161

Subsurface Investigations and Waste Management Unit

Glen Young (<mailto:glen.young@dnr.mo.gov>)

Unit Chief, Geologist IV
573-368-2333

Terry Hawkins (<mailto:terry.hawkins@dnr.mo.gov>)

Geologist III
573-368-2164

Peter Bachle (<mailto:peter.bachle@dnr.mo.gov>)

Geologist II
573-368-2472

Brenna McDonald (<mailto:brenna.mcdonald@dnr.mo.gov>)

Geologist II
573-368-2163

Fred Shaw (<mailto:fred.shaw@dnr.mo.gov>)

Technical Assistant III
573-368-2479

John Pate (<mailto:john.pate@dnr.mo.gov>)

Geologist II
573-368-2148

Dan Nordwald (<mailto:dan.nordwald@dnr.mo.gov>)

Technical Assistant IV
573-368-2451

Environmental Assistance Unit

Vacant

Doug Mendoza

Permit

From: John Lodderhose
Sent: Monday, November 28, 2016 12:42 PM
To: Doug Mendoza; Ken Goins
Cc: Lance LeComb
Subject: RE: Bridgeton Landfill - Permit 1003803000 draft mod

Looks good to me, Doug. I agree with your recommendations.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Doug Mendoza
Sent: Monday, November 28, 2016 10:23 AM
To: John Lodderhose; Ken Goins
Cc: Lance LeComb
Subject: FW: Bridgeton Landfill - Permit 1003803000 draft mod

John & Ken,

Bridgeton Landfill has submitted a response back to the draft permit that was prepared for it. They agree with the changes made in the draft permit adding monitoring and a discharge limit for tritium (hydrogen-3). However, they also request a clarification to the permit special condition for "Radioactive Discharge Reporting Requirements." They want the 1 curie limit for all radioactive materials combined to exclude tritium. They state, "This clarification is consistent with the applicable state law from which the MSD limit was derived."

The letter, along with its attachments, appear to make a valid case in:

- attributing tritium in landfill leachate to devices containing self-luminous elements,
- providing 'expert' testimony that these elements are the likely source of tritium in Bridgeton Landfill's leachate, rather than radioactive materials or byproducts from Westlake Landfill,
- and showing the derivation of MSD's limits from the Missouri state regulations that include the exemption for self-luminous elements.

The letter states that MDNR's expert Peter Price of the Missouri Geological Survey provided the expert testimony I cite above, and include an excerpt of the testimony in an attachment where he clearly states the matter. However, the excerpt does not state who Peter Price is. I looked online and found the attached information, which shows that he is indeed Section Chief for MDNR's Environmental Geology Section.

The letter also cites the applicable state regulation which allows the exemption, 19 CSR 20-10.020(1)(A). However, it does not include the regulation as an attachment, nor any of the text. I have attached the regulation, and copied the applicable excerpts below:

19 CSR 20-10.020 Exemptions from Requirements of this Chapter

PURPOSE: This rule lists exemptions from the requirements of this chapter. It avoids unnecessary regulation and duplication of regulatory authority.

(1) The following materials, machines and conditions are exempt from the requirements of this chapter:

Doug Mendoza

Permit *du*

From: Sincox, Dana <DSincox@republicservices.com>
Sent: Wednesday, November 30, 2016 10:19 AM
To: Doug Mendoza; Fanning, Erin
Cc: Kevin Kamp
Subject: RE: Bridgeton Landfill - Permit 1003803000 draft mod

Doug,

Thanks for the update. Please let us know if you need any further supporting documentation to assist you in your review.

Dana Sincox
Environmental Manager
Bridgeton Landfill, LLC

13570 St. Charles Rock Rd., Bridgeton, MO 63044
e dsincox@republicservices.com
o (314) 656-2116
c (314) 313-0838
w www.republicservices.com



We'll handle it from here."

From: Doug Mendoza [<mailto:DMENDOZA@stlmsd.com>]
Sent: Wednesday, November 30, 2016 8:48 AM
To: Fanning, Erin
Cc: Sincox, Dana; Kevin Kamp
Subject: RE: Bridgeton Landfill - Permit 1003803000 draft mod

Erin,

The Metropolitan St. Louis Sewer District is still reviewing Bridgeton Landfill's response to the draft modified permit. We anticipate that it will take only a few more days. MSD will hold off on issuing the final modified permit until we have completed our review and potentially made any further permit modifications. Should additional permit modifications be made, Bridgeton Landfill will again have opportunity for comment.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT
Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Doug Mendoza

Permit *du*

From: Doug Mendoza
Sent: Wednesday, November 30, 2016 8:48 AM
To: 'Fanning, Erin'
Cc: Sincox, Dana; Kevin Kamp
Subject: RE: Bridgeton Landfill - Permit 1003803000 draft mod

Erin,

The Metropolitan St. Louis Sewer District is still reviewing Bridgeton Landfill's response to the draft modified permit. We anticipate that it will take only a few more days. MSD will hold off on issuing the final modified permit until we have completed our review and potentially made any further permit modifications. Should additional permit modifications be made, Bridgeton Landfill will again have opportunity for comment.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT
Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

From: Fanning, Erin [<mailto:EFanning@republicservices.com>]
Sent: Tuesday, November 15, 2016 6:15 PM
To: Doug Mendoza
Cc: Sincox, Dana; Kevin Kamp
Subject: Bridgeton Landfill - Permit 1003803000 draft mod

Good afternoon Doug,

Attached please find our response to the proposed modification to Permit 1003803000.

Thank you very much for your time, have a great rest of the week, and please do not hesitate to contact me with any questions.

Kindest regards,

Erin Fanning
Division Manager

Bridgeton Landfill, LLC.
13570 Saint Charles Rock Road
Bridgeton, MO 63044
Cell: (209) 227-9531

Doug Mendoza

Permit

From: Fanning, Erin <EFanning@republicservices.com>
Sent: Tuesday, November 15, 2016 6:15 PM
To: Doug Mendoza
Cc: Sincox, Dana; Kevin Kamp
Subject: Bridgeton Landfill - Permit 1003803000 draft mod
Attachments: 2016-11-11 4337 BLF to MSD re Permit 1003803000 draft mod.pdf

Good afternoon Doug,

Attached please find our response to the proposed modification to Permit 1003803000.

Thank you very much for your time, have a great rest of the week, and please do not hesitate to contact me with any questions.

Kindest regards,

Erin Fanning
Division Manager

Bridgeton Landfill, LLC.
13570 Saint Charles Rock Road
Bridgeton, MO 63044
Cell: (209) 227-9531

Bridgeton Landfill LLC

November 11, 2016

Mr. Doug Mendoza
Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147-2913

Re: Discharge Permit No. 1003803000 – 1.3 (Draft Modification)
For premise at: 13570 St. Charles Rock Road
Bridgeton, MO 63044

Dear Mr. Mendoza:

This letter responds to your October 17, 2016 correspondence enclosing the Draft Modification for the above-referenced Permit to Discharge. Bridgeton Landfill has reviewed the proposed modifications and agrees with those additions to the permit (specifically, to add tritium as a monitoring parameter to sampling points 013 and 014, with a sampling frequency of once/3 months, and a monthly average discharge limit of 10,000,000 picocuries/L). However, the permit modification should also include a clarification to Special Condition C.3 to note that the 1 curie limit for all radioactive materials combined does not apply to tritium. This clarification is consistent with the applicable state law from which the MSD limit was derived.

As explained in more detail below, the MSD Ordinance reflects the requirements of state and federal restrictions on disposal of radioactive materials, consistent with EPA's Model Ordinance. The state law limiting wastewater discharges to 1 curie of radioactive material per year specifically exempts "devices containing self-luminous elements." Tritium is commonly found in landfill leachate, and is generally recognized to result from historic disposal of self-luminous devices like highway signs. The exemption for "devices containing self-luminous elements" would include tritium-containing highway signs. Therefore, the tritium in the leachate is not subject to the 1 curie/year limitation.

Source of Tritium

Tritium is frequently found in landfill leachate. We are providing for your reference the enclosed studies which discuss the commonality of tritium in landfill leachate and the recognition that self-luminescent exit signs are the primary source. The Association of State and Territorial Solid Waste Management Officials produced the enclosed 2009 report on the Lack of Tritium Exit Signs Control and Contamination of Landfill Leachate. As noted in that report, it was apparent that tritium exit signs were disposed of in landfills. The report found that the expected level of tritium in even a limited number of highway signs would account for the tritium identified in landfill leachate across the United States. In addition, A Study of Tritium in Municipal Solid Waste Leachate and Gas, published in 2007, recognized that tritium in exit signs were the likely source of tritium in landfills as a result of a substantial ✓

13570 St. Charles Rock Road • Bridgeton, Missouri • Tel: 314-744-8165

MSD 034482

number of signs being disposed into municipal solid waste or construction and demolition landfills. The Bridgeton Landfill, when operational, received commercial, industrial and construction & demolition wastes. These waste streams were likely to contain self-luminous signs during the landfill's operations, just as the majority of those landfills reviewed in the enclosed reports.

MDNR has recognized self-luminous exit signs as the only known source of tritium in Bridgeton Landfill. MDNR's expert Peter Price of the Missouri Geological Survey noted that tritium was a reliable tracer for landfill leachate because of the common disposal of self-luminous exit signs. We have enclosed an excerpt from a recent hearing in which Mr. Price described his assessment of the source of the tritium in the Bridgeton Landfill leachate. Note that Mr. Price stated that the tritium in leachate is not present due to radioactively impacted materials from the adjacent West Lake Landfill. ✓

All available information supports the conclusion that the tritium found in the Bridgeton Landfill leachate results from self-luminous devices like highway exit signs, which are "devices containing self-luminous elements" and thus exempt from the 1 curie/year limitation. ✓

Applicable Discharge Requirements

EPA's Model Pretreatment Ordinance includes model provisions for Prohibited Discharges. An optional discharge prohibition in that model is:

Wastewater containing any radioactive wastes or isotopes except in compliance with applicable State or Federal regulations.

MSD Ordinance 4786, effective 1982, followed EPA's Model Ordinance and included the following as Article VI, Section Two, 6:

The introduction of radioactive material subject to Federal or State regulations into the wastewater system shall be permitted only if special authorization is obtained from the Director prior to the introduction of such materials. In general, the decision of the Director will be in accordance with the principles set out in applicable Federal and/or State regulations. Any radioactive material discharged to the wastewater system must be readily soluble or dispersible in water.

In 1991 MSD enacted revised Ordinance 8742, replacing Ordinance 4786. That updated Ordinance included the following restriction on radioactive disposal, as Article 5, Section One, 13:

Any radioactive material, except those wastes which are authorized for disposal into sanitary sewers under applicable State and Federal regulations and as specifically authorized by the Director. The aggregate of all radioactive materials discharged from all users to the sewers tributary to each of the District's treatment plants shall be limited to one (1) curie per year.

Bridgeton Landfill LLC

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble or dispersible in water.

That updated Ordinance reflected the requirements of Department of Health and Senior Services (DHSS) Rule on Protection Against Ionizing Radiation. That rule limits discharge of radioactive material into a sanitary sewer to one (1) curie per year. 19 CSR 20-10.090(4)(C). However that rule also exempts from the requirements of the chapter "devices containing self-luminous elements themselves." 19 CSR 20-10.020(1)(A). Because the tritium in the Bridgeton Landfill leachate resulted from devices containing self-luminous elements, it is not subject to the requirements of 19 CSR Division 20, Chapter 10, including the 1 curie/year discharge limit set by that rule. ✓

MSD's current Ordinance 12559 incorporated both the state law requirement first enacted by the 1991 Ordinance and a separate limit implementing Nuclear Regulatory Commission rules applicable to licensees. The relevant Ordinance language, Article V, Section One, 13, is incorporated into Bridgeton Landfill's Permit as Special Condition C.3. Because Bridgeton Landfill is not an NRC licensee, only the 1 curie/year limit restriction derived from the DHSS rule is applicable to Bridgeton Landfill. This restriction is properly applied to any radioactive material subject to the requirements of 19 CSR Division 20, Chapter 10 – Protection Against Ionizing Radiation. Because the tritium in the landfill results from self-luminous devices exempt from the requirements of that chapter, it should be excluded from Special Condition C.3.

Conclusion

We appreciate MSD's work to proactively update the Permit to ensure that Bridgeton Landfill's discharge under the Permit continues to be protective of human health and the environment. We intend to implement the tritium testing and reporting as part of our 4th Quarter monitoring event, with results reflected in our next Discharge Monitoring Report.

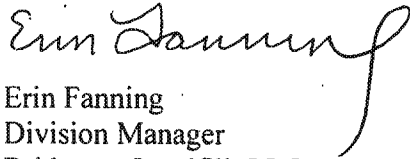
In order to avoid confusion we would request that the permit modification reflect that tritium, while subject to the monitoring and discharge requirements set by the proposed revision, is not subject to Special Condition C.3. This is consistent with the state law from which the 1 curie/year limit is derived and does not impair the ability of the District to ensure ongoing protection of human health and the environment.

Bridgeton Landfill LLC

Mr. Doug Mendoza
November 11, 2016
Page 4

Should you have any questions, we would welcome the opportunity to discuss this further.

Sincerely,

A handwritten signature in cursive script, appearing to read "Erin Fanning".

Erin Fanning
Division Manager
Bridgeton Landfill, LLC

Enclosures

Bridgeton Landfill LLC

Attachment A

(6) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause Interference or Pass Through;

(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

(8) Trucked or hauled pollutants, except at discharge points designated by [the Superintendent] in accordance with Section 3.4 of this ordinance;

{Note: Discharge prohibitions B.(1) through B.(8) are mandatory National Pretreatment Standards and must be included in the ordinance; discharge prohibitions B.(9) through B.(18) below are optional.}

(9) Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair; {optional}

(10) Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating [the City's] NPDES permit; {optional}

(11) Wastewater containing any radioactive wastes or isotopes except in compliance with applicable State or Federal regulations; {optional}

(12) Storm Water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, Noncontact Cooling Water, and unpolluted wastewater, unless specifically authorized by [the Superintendent]; {optional}

(13) Sludges, screenings, or other residues from the pretreatment of industrial wastes; {optional}

(14) Medical Wastes, except as specifically authorized by [the Superintendent] in an individual wastewater discharge permit [or a general permit {optional}]; {optional}

(15) Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test; {optional}

(16) Detergents, surface-active agents, or other substances which that might cause excessive foaming in the POTW; {optional}

(17) Fats, oils, or greases of animal or vegetable origin in concentrations greater than [() mg/l]; [Note: Numeric limits for these pollutants may be placed in Section 2.4] {optional}

Copper	1.5	4.5
Iron	15.0	45.0
Lead	0.2	0.6
Mercury	0.03	0.09
Nickel	2.0	6.0
Selenium	0.2	0.6
Silver	0.5	1.5
Zinc	3.0	9.0

Note: Concentrations listed above are total substance (dissolved plus suspended).

4. Any waters or wastes containing cyanides amenable to chlorination, expressed as CN, in excess of two milligrams per liter or total cyanide expressed as CN in excess of ten milligrams per liter.

5. Any water or wastes that contain more than ten milligrams per liter of hydrogen sulfide, sulfur dioxide, nitrous oxide, or chlorine gas;

6. The introduction of radioactive material subject to Federal or State regulations into the wastewater system shall be permitted only if special authorization is obtained from the Director prior to the introduction of such materials. (In general, the decision of the Director will be in accordance with the principles set out in applicable Federal and/or State regulations.) (Any radioactive material discharged to

(the wastewater system must be readily soluble or dispersible)
(in water.)

7. Any wastes which are of unusual volume, concentration of solids, or composition, as for example in total suspended solids of inert nature (such as Fuller's earth) and/or in total dissolved solids (such as sodium chloride, calcium chloride, or sodium sulfate) or which have a BOD which exceeds the standards of normal wastewater.
8. Any water or wastes containing emulsified oil and grease exceeding 100 milligrams per liter as measured by freon extraction.
9. Any water or wastes containing phenolic compounds in excess of 7.0 milligrams per liter.

B. Limits established in this section may be modified and the volume and concentration of contributions from users may be subject to more stringent requirements by the Director so that the aggregate contributions within each of the District's treatment areas of service do not cause treatment difficulties, or produce a wastewater or treatment facility effluent, air emission or sludge discharge in violation of the limits and requirements of applicable Federal and State regulations.

C. In any instance in which Federal and/or State requirements or limitations are more stringent than the limitations set forth in this Ordinance, said requirements and limitations on discharges shall be met by all users subject to

- 32 and 150 degrees Fahrenheit (0 and 65 degrees Celsius) or any other substances in quantities capable of causing obstruction to flow within the District's treatment plants or sewers, including any obstruction within the combined sewer system which causes or contributes to a combined sewer overflow.
5. Any garbage containing particles larger than one-half inch in any dimension or particles which will not be carried freely under the flow conditions of the sewer.
6. Any pollutant released at a flow rate and/or concentration which will cause interference with the operation of the wastewater system.
7. Heat in amounts which will cause interference with the operation or maintenance of the wastewater system, but in no case heat in such quantities that the temperature at the headworks of the District's treatment plant exceeds 40 degrees Celsius (104 degrees Fahrenheit).
8. Any water or waste which by itself or by interaction with other materials, emits toxic gases, vapors or fumes into the atmosphere of any area of the wastewater system at levels in excess of Threshold Limit Values (TLV) established for air-borne contaminants by the American Conference of Governmental Industrial Hygienists (ACGIH) or the Occupational Safety and Health Administration (OSHA).
9. Any trucked or hauled wastes except as authorized by District Ordinance, and in compliance with the provisions of this Ordinance. In no case may trucked or hauled wastes include any hazardous wastes as defined in 40 CFR Part 261 or in 10 CSR 25-4.261.
10. Any wastes which are highly colored, such as, but not limited to concentrated dye wastes, tannin or spent tanning solutions at concentrations which cause discoloration of District equipment or which cause the effluent from the District's plant to have an objectionable color.
11. Any petroleum based oil or grease, nonbiodegradable cutting oil or product of mineral oil origin except those which unavoidably enter the user's waste stream as a normal constituent of wastewater from processes or equipment which use or process such materials or through contact with areas contaminated with such materials. In no case may such materials be discharged in quantities or concentrations which will cause interference or pass through.
12. Any infectious wastes, except those wastes which are authorized for disposal into sanitary sewers under State regulations 10 CSR 80-7.010 and 19 CSR 30-20.011 or more stringent local regulations.
13. Any radioactive material, except those wastes which are authorized for disposal into sanitary sewers under applicable State and Federal regulations and as specifically authorized by the Director. The aggregate of all radioactive materials discharged from all users to the sewers tributary to each of the District's treatment plants shall be limited to one (1) curie per year. Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble or dispersible in water.
14. Any substance in quantities which either alone or in combination with other wastes results in the formation within the wastewater system of any malodor, foam, or other condition which is capable of creating a public nuisance or hazard to life or interferes with operation and maintenance of the system.

Section Two - Discharge Limitations.

The limitations for quantities and/or concentrations of pollutants contained in this section apply to all users who discharge to the District's wastewater system.

A. Categorical Pretreatment Standards:

Any industrial user having process waste streams which are subject to any Federal categorical pretreatment standards either currently in effect or promulgated or modified after the effective date of this ordinance shall comply with the requirements of such standards. All categorical pretreatment standards established pursuant to 40 CFR Chapter One, Subchapter N, are hereby incorporated by reference and are fully enforceable under this Ordinance the same as if fully set out herein. Limitations established in such standards shall apply to the treated effluents or, if no treatment is provided, to the untreated effluents from

of this Ordinance. In no case may trucked or hauled wastes include any hazardous wastes as defined in 40 CFR Part 261 or in 10 CSR 25-4.261.

10. Any wastes which are highly colored, such as, but not limited to concentrated dye wastes, tannin or spent tanning solutions at concentrations which cause discoloration of District equipment or which cause the effluent from the District's plant to have an objectionable color.
11. Any petroleum based oil or grease, nonbiodegradable cutting oil or product of mineral oil origin except those which unavoidably enter the user's waste stream as a normal constituent of wastewater from processes or equipment which use or process such materials or through contact with areas contaminated with such materials. In no case may such materials be discharged in quantities or concentrations which will cause interference or pass through.
12. Any infectious wastes, except those wastes which are authorized for disposal into sanitary sewers under State regulations 10 CSR 80-7.010 and 19 CSR 30-20.011 or more stringent local regulations.
13. ~~(Any) (radioactive) (material), (except) (those) (wastes) (which) (are) (authorized) (for) (disposal) (into) (sanitary) (sewers) (under) (applicable) (State) (and) (Federal) (regulations) (and) (which) (the) (District finds acceptable and is specifically authorized by) (the Director.) (Excreta from individuals undergoing medical~~

(medical diagnosis or treatment with radiological materials shall be exempt from this prohibition.) Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. Radioactive materials discharged from each user to the sewers tributary to each of the District's treatment plants shall be limited as follows:

(1) For users subject to licensing by the Nuclear Regulatory Commission:

5 curies Hydrogen-3

1 curie Carbon-14

1 curie for all other radioactive materials combined

(2) For all other users:

1 curie for all radioactive materials combined

14. Any substance in quantities which either alone or in combination with other wastes results in the formation within the wastewater system of any malodor, foam, or other condition which is capable of creating a public nuisance or hazard to life or interferes with operation and maintenance of the system.
15. Any wastewater resulting from activities involving regulated asbestos containing materials as defined in 40 CFR 61.141 unless first filtered prior to discharge using filters of appropriate pore size, as directed by State or local asbestos control agencies, or as authorized by the Director.
16. Any wastewater released at a flow rate which will surcharge

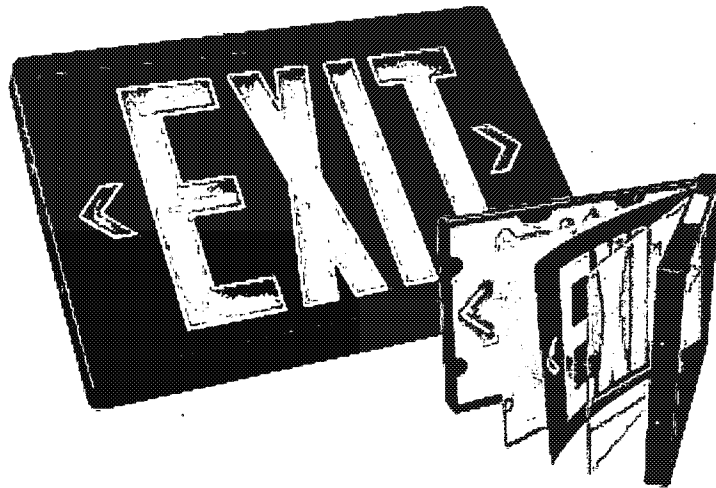
Attachment B

Association of State and Territorial

ASTSWMO

Solid Waste Management Officials

**Lack of Tritium Exit Signs Control and
Contamination of Landfill Leachate**



**FINAL
JULY 2009**

**ASTSWMO Radiation Focus Group
Federal Facilities Research Center**

**Association of State and Territorial Solid Waste Management Officials
444 North Capitol Street, N.W. Suite 315
Washington, D.C. 20001**

Acknowledgements

The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) is an organization supporting the environmental agencies of the States and Territories (States).

This document was prepared by the ASTSWMO Federal Facilities Research Center's Radiation Focus Group. The mission of the Radiation Focus Group is to identify national level radiation issues, coordinate State input, encourage improved partnership between State and Federal Agencies; and produce issue papers and other products as necessary to promote State interests on national radiation issues involving site cleanup and health and safety at federal facilities and other sites. The group acts as a resource to States in researching issues regarding radiation, providing information to States, and assisting in building State radiation program capacities, as requested by members.

ASTSWMO thanks the following members for their participation in development of this report:

Dale Rector, Focus Group Chair, TN
Jeff Deckler, Past-Focus Group Chair, CO
David Allard, PA
David Jones, ID
Jay Hyland, ME
Bobby Lopez, NM
John Mitchell, NY
Brian Nickel, OH
Jennifer Opila, CO
Mohinder Sandhu, CA
David Whitfill, KS

Lack of Tritium Exit Signs Control and Contamination of Landfill Leachate

Introduction

The Radiation Focus Group of ASTSWMO's Federal Facilities Research Center began researching tritium issues in 2003. At the same time, the U.S. Environmental Protection Agency (EPA) began conducting product stewardship activities concerning tritium containing devices; specifically self-luminescent tritium exit signs.

In 2003, the California Water Board evaluated 50 landfills for the presence of radioactive materials in landfill leachate. Above-background levels of tritium were found in leachate at 10 of these facilities.¹ In 2004, the Commonwealth of Pennsylvania began conducting a comprehensive two-year evaluation of 54 landfills that tested for the presence of radioactive materials in landfill leachate.² The study was conducted as a follow up to Pennsylvania's new requirements for radiation monitoring at solid waste management facilities and to confirm findings of the 2003 California study. In the Pennsylvania evaluation, above-background levels of tritium were noted in leachate at most facilities. Pennsylvania has done quarterly sampling for the past two years with similar findings. Studies in New York and New Jersey also have shown similar results.³ The source of higher-than-background levels of tritium found in landfill leachate samples is presumed to originate from the improper disposal of self-luminescent tritium exit signs found in construction and demolition (C&D) waste and other solid waste streams, as there are no other known sources of tritium in industrial or consumer products that would cause elevated levels of tritium in landfill leachate.

This paper is intended to serve as a source of information to assist State and Territorial program managers tasked with assessing tritium and solid waste disposal. Additional information on tritium can be located at the following:

- **Pennsylvania Department of Environmental Protection – Bureau of Radiation Protection**
http://www.dep.state.pa.us/brp/Radiation_Control_Division/Tritium.htm
- **Product Stewardship Institute (PSI)**
<http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=191>
- **U.S. EPA – RadTown USA – Discarded Tritium Exit Signs**
<http://www.epa.gov/radtown/exit-signs.html>
- **U.S. Nuclear Regulatory Commission (NRC)**
<http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/tritium-radiation-fs.html>

¹ <http://www1.ciwmb.ca.gov/LEAMemo/2003/RadSurvey/WaterSample.pdf>.

² http://www.dep.state.pa.us/brp/Radiation_Control_Division/SolidWasteMonitoring/SolidWasteRadMonitoringReports.htm

³ http://www.hydroqual.com/publications/rdm_07_01_a.htm

Tritium Basics

Tritium (H-3 or T) is a radioactive form (or isotope) of hydrogen (H) that emits a low energy beta particle and decays with an approximate 12-year half-life. Tritium is often used in the gaseous form, but once released to the environment it readily oxidizes to form tritiated water (T₂O or TOH). Separating or removing tritiated water from normal water (stable H-1) is very difficult and impractical. Tritium is found at background levels in the environment from natural cosmic ray atmospheric production, past above-ground nuclear weapons testing, and, globally, is a routine nuclear power plant airborne emission. In recent years, there have also been reports of systems having leaked at research and nuclear power reactors causing local groundwater contamination. Normal environmental background tritium levels, as tritiated water, are approximately 50 to 150 picocuries per liter (pCi/L) in surface and near surface ground waters.⁴

Tritium Uses

There are many uses of tritium and tritium label compounds. The federal government is the largest user of elemental tritium in the United States for use in fission-fusion weapons. Because it is a radioactive hydrogen isotope, tritium is often used in biomedical research to tag and trace materials *in vivo* thru research animals, or *in vitro* using biochemistry methods. For example, certain molecules can be tagged with tritium and the fate determined by liquid scintillation counting or autoradiography. Similarly, tritium is used to trace ground water movement. There are also many applications of tritium self-luminous devices, where tritium gas fills a tube coated with a material (e.g., ZnS) that will emit light when struck by tritium's low energy beta particles. The glass tube prevents any radiation from escaping the device. Examples of these devices include exit signs, wristwatches, and compasses.^{5,6}

Regulatory Control of Tritium Exit Signs

The U.S. NRC allows the manufacturing of exempt and generally licensed (GL) devices that contain tritium⁷. An overview of GL uses and guidance documents are provided by the NRC at the following:

- General License Uses
<http://www.nrc.gov/materials/miau/general-use.html>
- NUREG-1556, Vol. 16. December 2000
 - Appendix K - Guidance for 10 CFR 31.5 General Licensees (Q&As).
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v16/#48#48>
 - Appendix L: Guidance on Self-Luminous Exits (Q&As)
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v16/#_1_56

⁴ <http://www.nrc.gov/reactors/operating/ops-experience/grndwtr-contam-tritium.html>

⁵ <http://www.epa.gov/rpdweb00/radionuclides/tritium.html#use>

⁶ <http://www.nrc.gov/about-nrc/radiation/related-info/faq.html>

⁷ 10 CFR 31; 10 CFR 32

A tritium exit sign is distributed as a GL device and may contain up to 25 curies (or 25,000,000,000,000 pCi) of tritium sealed in all the small glass tubes. The manufacturers of generally licensed self-luminous tritium exit signs are specifically licensed and must meet the safety criteria in 10 CFR 32 and in the table of dose limits in 10 CFR 32.24. A general licensee who receives a self-luminous tritium exit sign must appoint a "responsible individual" who is knowledgeable with the regulations and requirements for reporting events, transfer, and disposal of the device.⁸

In December 2006, the NRC mailed a Regulatory Information Summary (RIS) to general licensees to remind the regulated community of their responsibilities. A copy of the RIS is available at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2006/ri200625.pdf>

Impact on the Environment

Tritium is not an external hazard, but it may cause a radiation dose to humans when ingested or absorbed through the skin. Based on a 4 millirem per year (mrem/yr) dose limit, U.S. EPA has set a tritium maximum contaminant level (MCL) of 20,000 pCi/L for community drinking water supplies.⁹ However, California has established a lower Public Health Goal for tritium at 400 pCi/L.¹⁰ The NRC has set unrestricted area effluent concentrations for tritium from licensed facilities at 1×10^{-7} microcuries per milliliter ($\mu\text{Ci/ml}$) in air and 1×10^{-3} $\mu\text{Ci/ml}$ (or 6,000 pCi/L) in water.¹¹ If inhaled or ingested continuously over the course of a year, these concentrations would produce a dose of 50 mrem. There are no standards for tritium in landfill leachate; however, concerns relate to downstream sources of drinking water.

It is apparent that tritium exit signs are entering landfills via municipal or residual waste streams. When new, tritium exit signs may contain up to 25 curies (or 25,000,000,000,000 pCi) of tritium. The 2004 Pennsylvania studies indicate that over 90% of landfills had tritium above the 150 pCi/L normal background level, with over 50% above EPA's MCL for drinking water. Pennsylvania studies also show leachate tritium levels in 2004 and 2005 ranged from hundreds of pCi/L up to 200,000 pCi/L. A single tritium exit sign has the potential to cause the tritium levels observed.

Pennsylvania has also assessed potential tritium exposure to onsite workers and the offsite public based on a review of many factors, including review of authorized discharges of treated leachate from treatment facilities, locations of public water supply intakes, and the uses of treated leachate or landfill gas. Although the Commonwealth concluded that there are no current threats to the public's health or safety associated with those discharges or practices, they are taking a proactive strategy to include continued monitoring and assessment of tritium in landfill leachate in order to provide continued

⁸ 10 CFR 31.5(c)(12)

⁹ 40 CFR 141.16

¹⁰ <http://www.oehha.ca.gov/water/phg/pdf/PHGtritium030306.pdf>

¹¹ 10 CFR 20.1301; 10 CFR 20.1302; 10 CFR 20 Appendix B

protection of public health and safety and our natural resources. Implementation of this tritium strategy involves a collective effort of interdisciplinary resources within the Pennsylvania Department of Environmental Protection (DEP), primarily within Bureau of Radiation Protection (BRP), the Bureaus of Waste Management, Water Quality and Air Quality, and landfill operators.

Presently, landfill operators in Pennsylvania are sampling landfill leachate on a quarterly basis and submitting these samples to the DEP Bureau of Laboratories for tritium analysis. Results are being compared to a site-specific action level, based on dilution factors, set at a point where discharged, treated leachate might cause a down-stream water supply to exceed 10% of the tritium MCL. This has continued for nearly two years to trend tritium levels at each landfill. Follow-up quarterly sampling in 2007, 2008 and 2009 has noted levels as high as 350,000 pCi/L. At the conclusion of the two year study, Pennsylvania DEP will determine what long-term landfill leachate tritium sampling will be required.

Protection of the Public

The NRC does not require the registration of tritium exit signs. Many States require registration of tritium exit signs; however, most do not. In addition, some States routinely document lost or stolen tritium exit signs and report these events to NRC through the NRC's Nuclear Material Events Database (NMED) reporting system.

In the summer of 2006, Pennsylvania, using the NRC's mailing list, sent a notification to approximately 4,000 tritium exit sign general license (GL) holders who possess approximately 60,000 signs in the Commonwealth. Approximately 20% of the notifications were returned as "undeliverable," while many respondents did not know that they had a tritium exit sign(s) and many signs had exceeded their expirations dates.

Pennsylvania's Senate Energy and Environment Resources Committee also convened a hearing in June of 2006 to review the extent and implications of tritium in landfill leachate. The Committee discussed concerns related to high tritium levels having the potential to contaminate local ground water above the EPA's MCL of 20,000 pCi/L should landfill liners fail. Treated leachate at high concentrations (e.g., over 1E6 pCi/L) could have the potential to render a down-stream drinking water supply "vulnerable" to tritium, an EPA regulated radionuclide. In that tritium is not removed from leachate during treatment, only a site-specific assessment of dilution or direct tritium monitoring can determine where the finished drinking water concentration is in relation to the EPA's MCL of 20,000 pCi/L. The one Pennsylvania landfill with a measured leachate concentration as high as 350,000 pCi/L is treating the leachate onsite, has used the tritiated water for dust suppression, and is also permitted to discharge to a local stream. Such worker and public exposure pathways should be assessed.

In response to its notification results and to address the issue of tritium in landfill leachate, Pennsylvania DEP has requested NRC to amend its regulations to improve labeling and control of tritium exit signs. As noted above, NRC issued a regulatory

information summary (RIS 2006-25) in 2006 reiterating their requirements in 10 CFR 31 and 10 CFR 32 related to distribution, disposal, and appointment of a responsible individual. The NRC has also issued a request for information (RIF) from those organizations with over 500 tritium exit signs.¹²

As noted above, only a few States have documented landfill leachate with similar tritium concentrations. From 2005 to 2007, in a related aspect to tritium in landfill leachate, the NRC and the nuclear power industry expended thousands of manhours and millions of dollars evaluating similar tritium concentrations in groundwater around nuclear power plants.

In 2007, the Conference of Radiation Control Program Directors (CRCPD) expressed their growing concern with the ineffective regulatory control, inadequate labeling and improper disposal of tritium exit signs. Through discussion at their annual meeting and via an official Resolution, the CRCPD members commended the EPA for their efforts to mitigate the improper disposal of tritium exit signs and the NRC for issuing RIS 2006-25. However, CRCPD recommended that NRC and all States begin a national effort to actively alert general licensees with tritium exit signs of their regulatory obligations for control and disposal and to check expiration dates. Similarly, according to the CRCPD Resolution, States and NRC should continue to actively alert solid waste facilities, and the fire safety and building construction industries, as to the concerns related to tritium exit signs.¹³

While there is a growing concern in States over the regulation and disposal of tritium exit signs, several groups have developed guidance and training on how to safely handle and dispose of tritium exit signs, and how to respond to tritium releases. These include:

- **Kansas Department of Health and Environment – Gas Tritium Light Sources**
Provides guidance for the recovery of and response to damaged and/or broken tritium exit signs. This resource may be used as a guide for other States in responding to tritium releases. <http://www.kdheks.gov/radiation/radnews/9804.html#gts>
- **Product Stewardship Institute (PSI) – Tritium Exit Sign Stewardship**
In collaboration with EPA and other stakeholders, PSI has produced informational products pertaining to the proper handling and disposal of exit signs, including details on how and where to dispose of and recycle exit signs.
<http://www.productstewardship.us/displaycommon.cfm?an=1&subarticlenbr=191>
- **U.S. EPA - Responsible Management of Tritium EXIT Signs**
The U.S. EPA has developed an online and CD based training program to educate tritium exit sign users regarding proper handling and disposal. EPA's training program provides information on a number of topics, including an introduction to tritium and tritium exit signs, an overview of potential risks and health affects, and resources for proper regulation, handling and disposal of exit signs.
http://www.trainex.org/web_courses/tritium/index.htm

¹² <http://www.nrc.gov/reading-rm/doc-collections/news/2009/09-011.html>

¹³ http://www.crcpd.org/positions_resolutions/Waste_Mgmt/waste_20071114.html

Nonetheless, given the major public life safety risk of unrecognized expired tritium exit signs/reduced luminosity and the widespread environmental contamination that uncontrolled disposal has created, clearly the NRC must amend its regulations to address this situation.¹⁴ If this is done by NRC, Agreement States will need to amend their regulations in order to retain compatibility.

Problems with Tritium Exit Signs

The one major problem with tritium exit signs is regulatory control. The NRC's regulations require labeling of these devices, but the size of such labels is inadequate and an owner may not realize that it is subject to control by the NRC or an Agreement State. While the NRC did issue RIS 2006-25, submitted a Request for Information (RFI) to all users who have greater than 500 tritium exit signs, and created a fact sheet that highlights regulatory control, these actions were prompted primarily by State concerns and thousands of unaccounted-for exit signs.^{15,16,17}

One challenge States have observed is the numerous amount of tritium exit signs that have exceeded their manufacturer-stated expiration date. A tritium exit sign has a finite useful life due to the decay of tritium. Thus, the exit sign will decrease in luminosity and eventually fail to meet national fire safety criteria. The Product Stewardship Institute has identified disposal and recycle options for tritium exit signs; however, this continues to be a safety issue that will require continuous monitoring by local and State fire safety officials.¹⁸

As highlighted by Pennsylvania's outreach to general licensees in 2006, another challenge States are encountering is the tracking of exit signs. There are an estimated 2 to 3 million tritium exit signs in the United States. The general licensee who is in possession of a tritium exit sign may only transfer it back to the manufacturer or send it to a licensed entity for licensed disposal as low-level radioactive waste (LLRW).

From numerous reports of lost or stolen tritium exit signs by Agreement States and NRC, one can conclude that tritium exit signs are being disposed of in the normal solid waste stream.¹⁹ This is supported by the States that sample landfill leachate and find levels of tritium well above natural background. In addition to the 2004 and 2005 Pennsylvania studies, ongoing quarterly sampling and analysis of landfill leachate has yielded several landfills with concentrations in the 100,000 to 350,000 pCi/L range. As noted above, other surveys in the States of California, New York, and New Jersey have found similar levels.

¹⁴ <http://www.nema.org/stds/LSD13.cfm#download>

¹⁵ <http://www.nrc.gov/reading-rm/doc-collections/news/2009/09-011.html>

¹⁶ <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2006/ri200625.pdf>

¹⁷ <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/fs-tritium.html>

¹⁸ <http://www.productstewardship.us/associations/6596/files/UpdatedTritiumExitSignDisposalDoc4-24-06.doc>

¹⁹ <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2009/secy2009-0052/2009-0052scy.html>

Recommendations

The ASTSWMO Radiation Focus Group believes that the NRC should formally evaluate the submitted safety assessments for GL tritium exit signs with respect to disposal scenarios in solid waste transfer facilities, landfills and incinerators. The scope of an inappropriate disposal may range from a single sign to tens of signs, thus potential exposures need to be bounded. These safety assessments for GL tritium exit signs should fully assess tritium exposure scenarios via airborne and ingestion pathways.

The Focus Group recommends that NRC evaluate their regulations pertaining to generally licensed tritium exit signs, in particular, with respect to the size of labels alerting a user the exit sign contains radioactive tritium, the replacement date, and their proper transfer or disposal obligations. The Focus Group also recommends that NRC evaluate the need for a national and/or individual State-level tracking or registration program for tritium exit signs.

Attachment C

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/233707718>

A Study of Tritium in Municipal Solid Waste Leachate and Gas

Article · July 2007

DOI: 10.2175/193864707786542625

CITATIONS

2

READS

37

4 authors, including:



Robert D. Mutch
Columbia University

20 PUBLICATIONS 137 CITATIONS

[SEE PROFILE](#)



John D. Mahony
Manhattan College

34 PUBLICATIONS 2,357 CITATIONS

[SEE PROFILE](#)



Paul Paquin
HDR

44 PUBLICATIONS 4,176 CITATIONS

[SEE PROFILE](#)

All in-text references underlined in blue are linked to publications on ResearchGate, letting you access and read them immediately.

Available from: Paul Paquin
Retrieved on: 05 October 2016

A STUDY OF TRITIUM IN MUNICIPAL SOLID WASTE LEACHATE AND GAS

Robert D. Mutch, Jr., P.Hg, P.E.^{1,2,3}, John D. Mahony, Ph.D.,^{2,1}

Paul R. Paquin¹, Joseph Cleary, P.E.¹

¹HydroQual, Inc.


1200 MacArthur Blvd.

Mahwah, New Jersey 07430

²Manhattan College, Riverdale, New York

³Columbia University, New York, New York

ABSTRACT

It has become increasingly clear in the last few years that the vast majority of municipal solid waste landfills produce leachate that contains elevated levels of tritium. The authors recently conducted a study of landfills in New York and New Jersey and found that the mean concentration of tritium in ten municipal solid waste landfills was 33,800 pCi/L with a peak value of 192,000 pCi/L. A 2003 study in California reported a mean tritium concentration of 99,000 pCi/L with a peak value of 304,000 pCi/L. Studies in Pennsylvania and the UK produced similar results. The USEPA MCL for tritium is 20,000 pCi/L. Tritium is also manifesting itself in landfill gas and landfill gas condensate. Landfill gas condensate samples from landfills in the UK and California were found to have tritium concentrations as high as 54,400 and 513,000 pCi/L, respectively. The tritium found in MSW leachate is believed to derive principally from gaseous tritium lighting devices used in some emergency exit signs, compasses, watches, and even novelty items, such as "glow stick" key chains. 

This study reports the findings of recent surveys of leachate from a number of municipal solid waste landfills, both open and closed, from throughout the United States and Europe. The study evaluates the human health and ecological risks posed by elevated tritium levels in municipal solid waste leachate and landfill gas and the implications to their safe management. We also assess the potential risks posed to solid waste management facility workers exposed to tritium-containing waste materials in transfer stations and other solid waste management facilities.

KEYWORDS

Tritium, municipal solid waste leachate and gas, radioactivity

INTRODUCTION

In 2006, HydroQual, in conjunction with Manhattan College, conducted a study of tritium in municipal solid waste leachate from landfills in New York and New Jersey. The mean level of tritium found in the leachate of active landfills was 49,900 picocuries per liter (pCi/L), which is well above the USEPA-prescribed Maximum Contaminant Level (MCL) of 20,000 pCi/L. This study is not the first study to detect elevated levels of tritium in municipal solid waste leachate. Elevated tritium levels in leachate-contaminated groundwater have been reported as far back as 1982 (Egboka, et al, 1982). Generally regarded as outliers, these early detections of tritium in

municipal solid waste leachate generated only mild interest at the time. More recently, however, studies in Pennsylvania, California, the United Kingdom, and our study in New York and New Jersey have demonstrated that elevated levels of tritium are quite common in municipal solid waste leachate (PADER, 2006; CSWQB, 2003; Robinson and Grunow, 1996). Moreover, the levels being found in all these studies are not only high enough that tritium can serve as a useful tracer of leachate migration in the environment, which was the initial focus of our study, but are at levels that commonly exceed USEPA-established MCLs. Elevated tritium levels are also being detected in landfill gas and landfill gas condensate. Landfill gas has been shown to contain both tritiated water vapor and tritiated methane (Coleman, et al 1993). The particular wastes responsible for the tritium may also pose a risk to solid waste management workers in transfer stations, waste-to-energy plants, and construction and demolition (C&D) waste processing facilities.

In this paper, we briefly look at the behavior of tritium in the environment, the levels of tritium being found in municipal solid waste leachate gas and landfill gas condensate, the likely sources of tritium, the human health and ecological risks associated with tritium, the applicable regulatory standards, and the resulting implications to leachate and gas management.

Tritium in the Environment

Tritium, a radioisotope of hydrogen, is formed naturally in the upper atmosphere as a result of bombardment of nitrogen and oxygen nuclei by cosmic rays. Anthropogenic sources of tritium include nuclear weapon detonations, nuclear power plants, and some manufactured products. Prior to the atmospheric testing of nuclear weapons in the late 1950s and early 1960s, levels of tritium in precipitation averaged 5 to 10 tritium units (TU) or 15 to 30 picocuries per liter (pCi/L). Pre-nuclear age tritium levels in precipitation have been determined by sampling of wine bottles between 1927 and the 1940s as illustrated in Figure 1. Figure 1 also depicts the initial rise of tritium levels in precipitation caused by some of the first nuclear weapon detonations. Levels of tritium in precipitation continued to rise, as illustrated in Figure 2, peaking in 1963 at alarming levels of several thousand tritium units. The Nuclear Test Ban Treaty between the United States and the Soviet Union in 1963 ended almost all atmospheric testing of nuclear weapons and levels of tritium have been steadily declining. Nonetheless, current levels of tritium in precipitation over North America still average 10 to 30 TU (30 to 90 pCi/L).

Tritium's half life of 12.32 years dictates that vestiges of the peak rainfall concentrations of the early 1960s can still be detected in many groundwater systems. These remnants of the peak levels of the 1960s permit age dating of groundwaters and have helped answer many questions relating to hydrospheric circulation. As is the case in precipitation, tritium commonly binds with another normal hydrogen and oxygen to form that most common of substances, water. Water containing substituted tritium is referred to as "tritiated water." One Tritium Unit (3.221 pCi/L) equals one tritium atom in 10^{18} normal hydrogen atoms. Tritium exchanges with the hydrogen in other hydrogen-containing molecules. In the atmosphere over Japan, Okada and Momoshima, (1993) reported finding almost equal levels of tritiated water (HTO), tritiated methane, and tritiated hydrogen gas in a cubic meter of air. Being part of the water molecule, tritium travels conservatively with water making it an ideal tracer in surface water and groundwater systems.

Tritium has historically been used in surface water tracer studies (T. Gallagher, 2007). Nuclear power plants routinely release tritium to the environment. It is estimated that in 1987 all 417 nuclear power stations in 26 countries released approximately 680,000 Curies of tritium into the environment (UASCEAR, 1988). The Indian Point Power Plant in New York is permitted to release 1,800 Ci/year to the adjacent Hudson River (Times Herald Record, 2007).

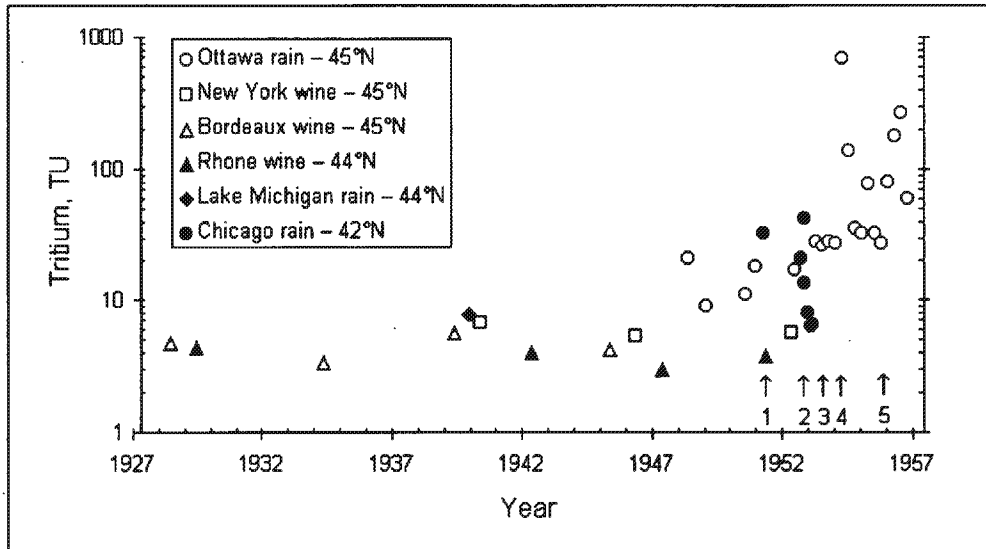


Figure 1. Levels of Tritium in Precipitation (1927-1957)

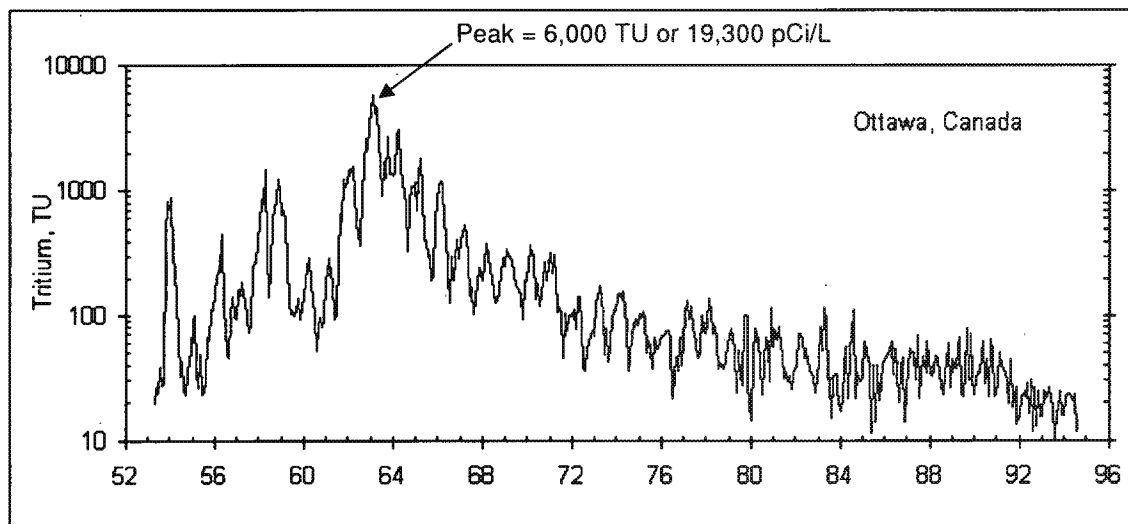


Figure 2. Levels of Tritium in Precipitation at Ottawa, Canada (1953-1995)

Tritium Levels in Municipal Solid Waste Leachate

In October of 2006, HydroQual conducted a study of tritium levels in leachate from ten landfills in New York and New Jersey. Six of the landfills were active. Four were closed and had ceased receiving waste from nine to thirty years earlier. Three of the landfills had also received some industrial waste. Key specifics of the ten landfills are given in Table 1.

Table 1. Specifics of Ten New York and New Jersey Landfills

Site Designation	Landfill Operational Status	Years Since Cessation of Operation	Nature of Solid Waste
1	Inactive	29	MSW ¹ , IW ²
2	Inactive	12	MSW
3	Active	0	MSW, IW
4	Inactive	30	MSW, IW
5	Active	0	MSW
6	Active	0	MSW
7	Active	0	MSW
8	Active	0	MSW
9	Inactive	9	MSW
10	Active	0	MSW

¹ Municipal Solid Waste

² Industrial Waste

In all cases, leachate samples were collected from leachate collection systems, which effectively integrated the leachate from either the entire landfill or a major segment of the landfill. The samples are, therefore, composite samples of the leachate generally reflecting the average leachate composition at the time sampled. Samples were collected in 100 mil plastic bottles and shipped to Waterloo Environmental Isotopes Laboratory at the University of Waterloo in Waterloo, Ontario. The samples were analyzed by direct counting using a liquid scintillation detector.

The results of the leachate analysis are presented in Figure 3. In the six active landfills, tritium levels varied from 1,254 to 191,835 pCi/L, with a mean of 49,900 pCi/L. The closed landfills had levels ranging from 96 to 35,942 pCi/L. The mean tritium level in all ten landfills was 33,800 pCi/L.

The tritium levels found in landfills in New York and New Jersey are comparable to levels found in other studies of municipal solid waste landfills. In a study of thirty municipal solid waste landfills in the United Kingdom, Robinson and Grunow (1996) reported a mean and maximum level of tritium of 24,900 and 126,500 pCi/L, respectively. A 2003 study of ten landfills in California conducted by the California State Water Quality Board (CSWQB) found a mean tritium level in leachate of 99,000 pCi/L, and a peak value of 304,000 pCi/L. Even more recent studies of 59 landfills in Pennsylvania were conducted by the Pennsylvania Department of Environmental Protection in 2004 and 2005. In 2004, they found mean and maximum levels of tritium in municipal solid waste leachate of 24,400 pCi/L and 93,500 pCi/L, respectively. Levels

in 2005 were similar with a mean of 20,900 pCi/L and a maximum of 182,000 pCi/L. The mean concentration from all these studies is 28,200 pCi/L.

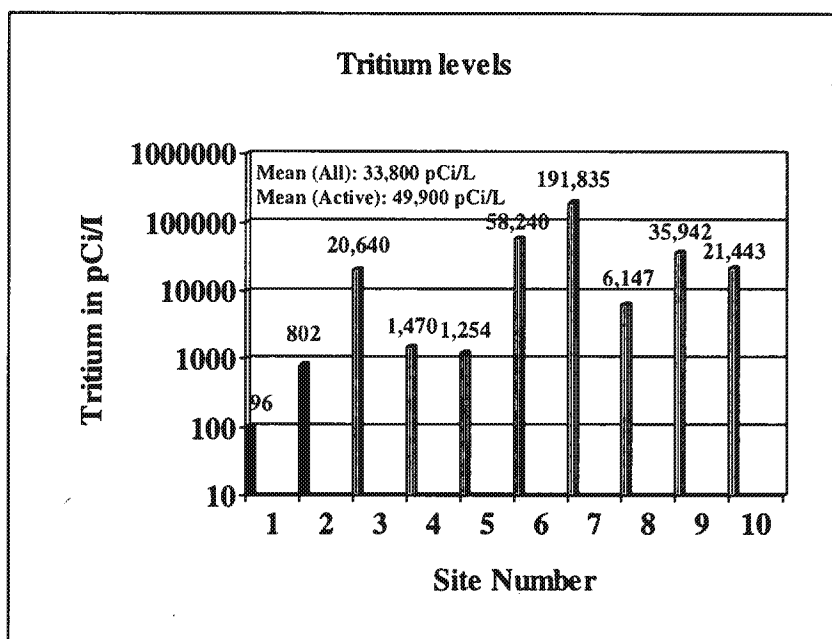
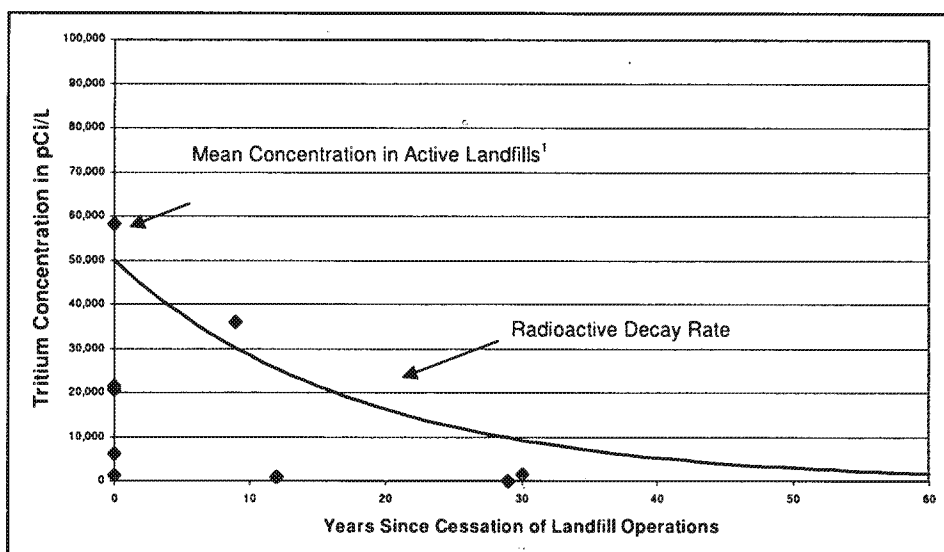


Figure 3. 2006 HydroQual/Manhattan College Study of Landfills in New York and New Jersey

In our study of landfills in New York and New Jersey, four of the landfills had ceased operation. The Pennsylvania landfills studied were all still operational (Allard, D., 2007). It is also believed that the landfills investigated in the United Kingdom and California were fully operational. Although the dataset is limited, a plot of leachate tritium levels versus time since cessation of landfill operations using only the New York/New Jersey data from our study provides some insight into the rate of decline in leachate tritium levels after landfill closure as illustrated in Figure 4. Also illustrated in the figure is the radioactive decay rate of tritium based upon its half life of 12.32 years and a starting concentration of 49,900, which was the mean concentration observed in the New York/New Jersey study. There is a suggestion in the limited data that tritium levels decline more rapidly than the radioactive decay rate. Such a finding is not surprising since recharge of precipitation through the landfill should gradually flush tritiated water from the landfill. Obviously, the rate of flushing by precipitation will be a function of the type of final cover material or cap employed at the landfill and local characteristic factors.

Tritium in Landfill Gas and Landfill Gas Condensate

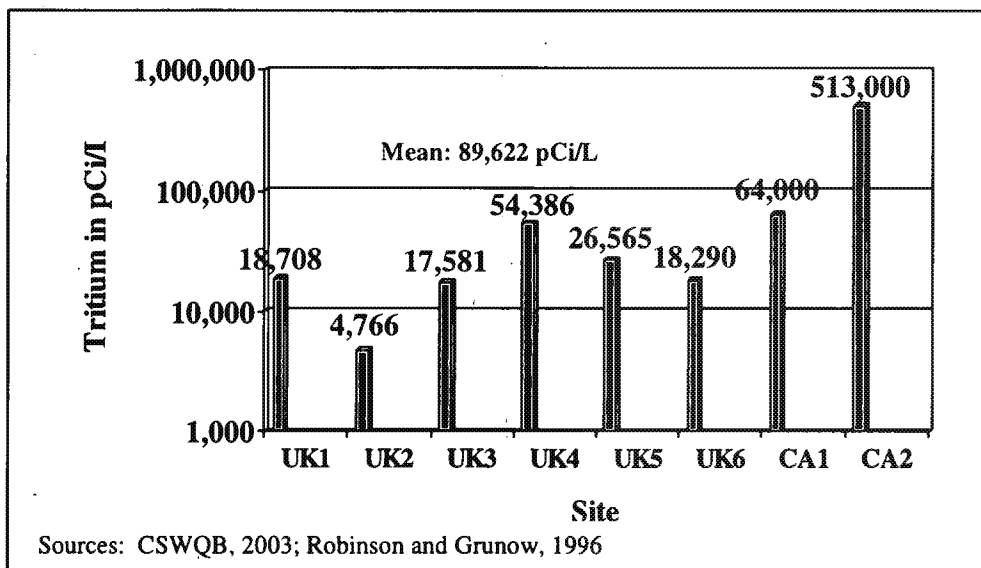
Elevated levels of tritium have also been found in both landfill gas and landfill gas condensate. Figure 5 illustrates the results of landfill gas condensate sampling from six landfills in the United Kingdom and two landfills in California (Robinson and Grunow, 1996; CSWQB, 2003). The mean level of tritium in landfill gas condensate was 89,622 pCi/L. Although this value is based on a smaller population of samples, it is notably higher than the mean level found in landfill leachate. Since landfill gas condensate is derived from the water vapor in landfill gas, one can



1. HydroQual/Manhattan College

Figure 4. Tritium Levels in Leachate Versus Time after Cessation of Landfill Operations

readily calculate the tritium level in landfill gas associated with water vapor. A simple psychrometric calculation, assuming a gas temperature of 70°F and a relative humidity of 100%, indicates that one cubic meter of landfill gas contains 19 grams of water vapor. Assuming that this water vapor contains the mean concentration of tritium observed in landfill gas condensate dictates that the water vapor-associated tritium in landfill gas would be 1,700 picocuries per cubic meter (pCi/m^3). The particularly elevated level of tritium found in the landfill gas condensate from the one California landfill (513,000 pCi/L) would correspond to a water vapor-associated level of tritium in landfill gas of 9,900 pCi/m^3 .



Sources: CSWQB, 2003; Robinson and Grunow, 1996

Figure 5. Tritium in Landfill Gas Condensate

The propensity of tritium to readily substitute for the hydrogen in both inorganic and organic molecules suggests that tritium should also be present in the methane and other hydrocarbons found in landfill gas. This has been confirmed by a study by Coleman, et al (1993) that found levels of tritiated methane in landfill gas ranging from 57.6 to nearly 2,800 tritium units. This corresponds to methane-associated levels of tritium ranging from 267 to 13,000 pCi/m³. The mean level of tritiated methane found by Coleman, et al (1993) was 4,900 pCi/m³. Therefore the combined level of tritiated methane and tritiated water vapor in landfill gas based upon the results of these studies would be approximately 6,600 pCi/m³.

It is useful to consider the flux of tritium from a landfill having tritium levels in landfill gas and leachate of the magnitude described above. Take, for example, a landfill with the following properties:

- 100 acres
- Average depth of 75 feet
- Recharge rate of 15 inches per year
- Peak gas generation rate of 0.5 standard cubic feet per minute per thousand in-place cubic yards
- Average leachate tritium level of 50,000 pCi/L (based upon mean levels found in the active landfills in the New York/New Jersey study)
- Average landfill gas concentration of 6,600 pCi/m³ (based upon mean levels in water vapor and methane)

Given the above characteristics, the example landfill would have a flux of tritium in the leachate of 7.7 curies per year. In contrast, landfill gas from the example landfill would contribute a flux of 0.59 curies per year. The total flux of tritium would, therefore, be 8.3 curies per year with leachate representing 93 percent of the tritium flux. This total flux is not particularly high given that many nuclear reactors are permitted to discharge in excess of 1000 curies per year of tritium, usually into large bodies of receiving water.

Suspected Sources of Tritium in Municipal Solid Waste Landfills

Initial speculations suggested that luminescent paint in solid waste materials may account for the observed tritium in leachate (Robinson and Grunow, 1996; Hackley et al, 1993). More recently, however, attention has focused on gaseous tritium lighting devices (GTLD) as likely being the principal culprit. An example of a GTLD is self-powered exit signs. The majority of the common exit signs used in buildings, ships, and aircraft are either powered by batteries, direct hard wired electricity or both. GTLDs on the other hand require neither batteries nor direct electrical connections. In GTLD exit signs, the letters consist of sealed glass tubes filled with tritium gas and coated on the interior with a phosphor material. As the tritium decays, the beta rays generated excite the phosphor causing it to emit a greenish glow that is visible in a darkened environment. These exit signs typically contain 10-15 Curies of tritium but some contain as much as 30 Curies. They have usable life spans of 10-12 years due to the relatively short 12.32 year half life of tritium. Other GTLDs include military-style compasses, some watches, some gun sites, and even glow-in-the-dark novelty items such as key chains.



Tritium-based exit signs are regulated by the Nuclear Regulatory Commission. Purchasers are licensed and are required to return exit signs that have exceeded their normal lifespan through a licensed tritium recycling facility. GTLD exit signs all include warning labels indicating the amount of tritium initially contained within the exit sign and warning against disposal of the sign other than by transfer to persons specifically licensed by the NRC or an agreement state (several states have been delegated responsibility by the NRC and are referred to as agreement states).

The Product Stewardship Institute (PSI) of the University of Massachusetts (2003) estimates that over two million exit signs have been registered in the United States in the 20 year period between 1983 and 2002. A significant, but unknown, percentage of tritium signs are not properly returned and recycled. Manufacturers often charge a fee of \$30 to \$100 to accept returned signs (PSI, 2003). These recycled exit signs are shipped to tritium tube manufacturing facilities outside the United States for recycling/disposal. It is suspected that a significant percentage, perhaps even a majority, of these signs ultimately find their way into municipal solid waste or construction and demolition wastes.

Human Health Risks, Ecotoxicity and Applicable Regulatory Standards

As radionuclides go, tritium is not particularly hazardous. Nonetheless, as a beta generator it is a known human carcinogen. Tritium can enter the body through ingestion, inhalation or by direct dermal contact. Once in the body, it is distributed fairly uniformly throughout the body. It is readily eliminated from the body with half lives of roughly 10 days, 30 days, and 450 days (Okada and Momoshima, 1993). Body burdens of tritium can therefore be readily measured through urinalysis.

USEPA has set a MCL for most beta or gamma-emitting radionuclides equivalent to 4 mrem/yr to the total body or to any given internal organ. A separate MCL for tritium was established at 20,000 pCi/L and translates to one mrem/yr to the total body. It is based upon drinking two liters per day of tritiated water for a lifetime. Many states have also adopted the 20,000 pCi/L as their surface water quality standard for tritium. Table 2 shows the surface water quality standard for several states. South Dakota has established a much more stringent standard of 300 pCi/L.

Table 2. State Surface Water Quality Standards

State	Surface Water Quality Standard pCi/L	Comments
New York	20,000	Applicable to streams classified for water supply use: A, A-S, AA, AA-S
New Jersey	20,000	Generally applicable
Pennsylvania	20,000	Generally applicable
California	20,000	CA Public Health Goal (PHG) for tritium is 400 pCi/L if used for water supply
Kansas	20,000	Water Supply Use
Virginia	20,000	Human Health
South Dakota	300	

California has also established a Public Health Goal (PHG) of 400 pCi/L for tritium. California's PHGs are "...estimates of the levels of contaminants in drinking water that would pose no significant health risk to individuals consuming the water on a daily basis over a lifetime." California PHGs are based strictly on scientific and public health considerations without regard to economics or technical feasibility. California's PHGs are based on a *de minimus* excess cancer risk of 10^{-6} (one in a million). California's PHG for tritium in drinking water is 400 pCi/L. A 10^{-5} risk would, therefore, correspond to a tritium level of 4,000 pCi/L and a 10^{-4} risk to a level of 40,000 pCi/L. The 20,000 pCi/L MCL for tritium corresponds to a risk of 5×10^{-5} based upon California's risk calculations.

Implications to Leachate and Landfill Gas Management

There are no cost-effective technologies for removing tritium from water. Considerable research has been done on the subject by the nuclear industry with little success. Those tritium water treatment technologies that have been developed are exotic and prohibitively expensive. Publicly owned treatment works (POTWs) into which many landfills discharge their leachate afford no treatment of tritium other than by dilution by other waste water streams. Most POTWs in this country also do not have discharge standards or monitoring programs for tritium. Nonetheless, on a case by case basis some POTWs have imposed stringent radiological standards for discharges from closed landfills. A case in point is the GEMS Landfill Superfund site in New Jersey. At this site, the POTW imposed the drinking water standard for uranium and radium for discharge of leachate-contaminated groundwater. (A)

On site leachate treatment plants with a direct discharge to receiving bodies should not have difficulty meeting most state's surface water quality standards (i.e., 20,000 pCi/L), except possibly for large landfills discharging to relatively small streams. Groundwater pump and treat systems that recharge treated, leachate-contaminated groundwater back to an aquifer may be of concern to regulators in some jurisdictions. Some states do not permit recharge of treated waters that exceed groundwater quality standards. Since tritium cannot practically be treated by any groundwater treatment process, violation of this standard would be difficult to avoid in cases where tritium levels in the contaminated groundwater leachate exceed the MCL.

Leachate evaporators pose a somewhat different circumstance. A leachate evaporator will shift the tritium flux from surface water to the air. For example, consider our example 100-acre landfill. A leachate evaporation system that burns landfill gas to evaporate leachate would convert both the tritium in the leachate and the tritiated methane in the landfill gas to tritiated water vapor. In so doing, such a system would eliminate all releases of tritium to surface water, but would increase atmospheric discharge of tritium by 14 times from 0.59 curies per year to 8.3 curies per year.

Landfill gas is composed of roughly 50 percent methane, 50 percent carbon dioxide and a variety of trace gases. Landfill gas exiting the landfill generally has a relative humidity of nearly 100 percent. As discussed earlier, tritium has been found in the water vapor and the methane and is likely present to some extent in the trace hydrocarbons within the landfill gas. Landfill gas is typically pre-treated by condensation to remove excess water vapor prior to burning the gas for

energy generation. This preprocessing step removes much of the water vapor from the gas and in so doing removes some of the tritium from the gas. With most of the water vapor removed, the data reported by Coleman, et al (1993) would suggest that most of the remaining tritium would be associated with the methane in the gas. If the gas is then combusted in either a landfill flare, a leachate evaporator or a gas-to-energy facility, the tritiated methane would be converted to tritiated water vapor. Although combusting the methane has obvious benefits from an energy recovery and reduction of greenhouse gases standpoint, the conversion of tritiated methane to tritiated water vapor puts the tritium in its potentially most harmful form. The absorption efficiency of tritiated water vapor is virtually 100 percent while the absorption efficiency of tritiated methane is only 0.1 percent (ICRH, 2006). Even with these assumptions, the risk to landfill workers and any nearby residents would be minimal. For example, assume that a landfill gas is combusted, thereby converting each mole of tritiated methane to two moles of tritiated water vapor. The resulting concentration of tritium in the exhaust would be roughly 4,150 pCi/m³ (1,700 pCi/m³ of original water vapor plus one half of 4,900 pCi/m³ of tritiated methane, now converted to water vapor). Under such a scenario, an exposed individual would have to continuously breathe landfill gas exhaust, 24 hours per day, 365 days per year, to produce an Effective Dose Equivalent (EDE) greater than 3 mrem/yr as illustrated below. Of course, no one breathes landfill gas exhaust directly and in all likelihood atmospheric dispersion would reduce the concentrations of tritium by orders of magnitude before any exposure occurs.

Calculation of Worst-Case Effective Dose Equivalent (EDE)

$$EDE = C \times SAF \times BR \times DCF$$

C	=	Concentration of tritium in pCi/m ³
SAF	=	Skin absorption factor (1.5)
BR	=	Breathing rate (8,400 m ³ /yr)
DCF	=	Dose conversion factor (6.4 x 10 ⁻⁸ mrem/pCi)
EDE	=	4,150 pCi/m ³ x 1.5 x 8,400 m ³ /yr x 6.4 x 10 ⁻⁸ mrem/pCi

$$EDE = 3.3 \text{ mrem/year}$$

The absence of a viable treatment technology for removing tritium from water dictates that tritium must be released to the environment in some manner that disperses it into the environment without exceeding water quality standards or representing an unacceptable risk to public health or the environment. The above preliminary analysis suggests that this should be readily managed at most landfill sites, although further research on tritium levels in leachate and landfill gas and its dispersal into the environment from landfills would be useful.

Implications to Worker Safety in Other Solid Waste Management Facilities

The fact that GTLDs find their way into MSW landfills is at this point quite evident. It is worth noting that in getting to a landfill, MSW and the GTLDs contained within it, often pass through intermediate solid waste management facilities, such as transfer stations. Significant quantities of MSW also go to waste-to-energy plants with only the ash ultimately reaching a landfill.

Preliminary calculations suggest that workers in these types of facilities could potentially be subject to intermittent, although possibly substantial, exposures to tritium.

Consider, for example, a transfer station scenario with the following assumptions:

1. The building is 20 meters wide, 30 meters long and 7 meters high.
2. A GTLD exit sign containing 5 Curies of tritium is broken open during trash handling activities.
3. The 5 Curies of tritium become uniformly dispersed within the air of the transfer station.

Under these circumstances, the resulting concentration of tritium in the air of the transfer station would be 1.2×10^9 pCi/m³. This concentration exceeds the Nuclear Regulatory Commission (NRC) recommended maximum annual air concentration for exposure to members of the public living near nuclear power plants of 1×10^5 pCi/m³ (USNRC, 2007) by more than 10,000 times. The NRC standard is based upon an annual tritium dose of 50 mrem (USNRC, 2007). Of course, transfer station workers are not continuously exposed to tritium over the course of an entire year which is the basis of the NRC's threshold concentration. However, even a one-hour exposure to the predicted concentration of 1.2×10^9 pCi/m³ would more than equal the annual tritium dose associated with the NRC's airborne limit of 1×10^5 pCi/m³. An exposure of less than five minutes would exceed the USEPA's recommended exposure to beta radiation, which is based upon a maximum annual dose of 4 mrem. At this point, there is apparently no information regarding the frequency of GTLD exit sign breakage in transfer stations or other solid waste management facilities, the amount of tritium released in each event, the extent the tritium is converted to tritiated water vapor, and its airborne persistence in the facility. Consequently, it is difficult to assess the actual risk posed to workers in transfer stations or other solid waste management facilities. Nonetheless, the above, preliminary analysis suggests that further investigation of this issue is warranted.

CONCLUSIONS

Our study of landfills in New York and New Jersey, combined with studies in the United Kingdom, California, and Pennsylvania, have demonstrated that elevated levels of tritium in municipal solid waste leachate and gas are commonplace. Moreover, the majority of landfills in all the studies have tritium levels in excess of USEPA's MCL for tritium. Predictably, the tritium also manifests itself in landfill gas both as tritiated water vapor and as tritiated methane. The principal source of the tritium appears to be gaseous tritium lighting devices, most notably self-powered exit signs that contain up to 30 curies of tritium. Tritium levels in leachate or landfill gas do not likely pose a significant threat to the landfill workers or residents living near landfills since exposure to leachate and gas is generally minimal. Nonetheless, further study of this issue seems warranted given the public's well documented concern over exposure to radiologic agents. Although data is lacking, preliminary calculations suggest that tritium released from breakage of GTLDs in transfer stations and other solid waste management facilities could, under some circumstances, pose a risk to workers.

Further research seems warranted in the following areas:

- Tritium levels in leachate over a broader geographical area of the United States
- Tritium levels in construction and demolition debris landfills which may also be the recipient of improperly disposed GTLD exit signs
- Levels of tritium in landfill gas and specifically how it is partitioned between water vapor, methane and possibly other constituents within the gas.
- The tritium concentration in the exhaust of leachate evaporators and landfill gas-to-energy facilities and the specific forms of the tritium.
- Tritium exposure to workers in other solid waste management facilities, such as transfer stations, waste-to-energy plants, and C&D processing facilities.

Even if the above described recommended studies demonstrate that solid waste tritium associated with solid waste management facilities poses no significant risk to public health or the environment, experience suggests that a perception of risk may still pose a problem for many facilities. Relations between solid waste facilities and local populations are often contentious and having solid waste management facilities become associated with tritium, a topic that is normally reserved for nuclear power plants, cannot be helpful however small the levels may be compared to those associated with nuclear power plants. Experience suggests that the issue of risk perception can best be overcome by a careful analysis of the real risk together with well planned and managed risk communication.

REFERENCES

Allard, D., PADER, Personal Communication, 2007.

California State Water Quality Board, 2003.

Coleman, D.D.; Liu, C.L.; Hackley, K.C.; Benson, L.J. (1993) Identification of Landfill Methane Using Carbon and Hydrogen Isotope Analysis. Presented at the Sixteenth International Madison Waste Conference, September 22-23, 1993, Department of Engineering Professional Development, University of Wisconsin-Madison.

Egboka, B.C.E.; Cherry, J.A.; Farvalden, R.N.; Frind, E.O. (1983) Migration of Contaminants in Groundwater at a Landfill: A Case Study. *Journal of Hydrology*, **63**, 51-80.

Gallagher, T., HydroQual, Inc., Personal Communication, 2007.

Hackley, K.C.; Liu, C.L.; Coleman, D.D. (1996) Environmental Isotope Characteristics of Landfill Leachates and Gases. *Ground Water*, **34** (5) 827-836.

International Commission on Radiological Health Database, Draft – 16 January, 2006.

Okada, S; Momoshima N. (1993) Overview of Tritium: Characteristics, Sources, and Problems. *Health Physics*, **65** (12) 595-609.

PADER (2006) *Radiological Investigation Results for Pennsylvania Landfill Leachate Fall 2005 Tritium Update*, April 7, 2006.

Product Stewardship Institute (2003) *Radioactive Materials Product Stewardship: A Background Report for the National Dialogue on Radioactive Materials Product Stewardship*, University of Massachusetts/Lowell, June 11, 2003.

Robinson, H.D.; Gronow, J.R. (1996) Tritium Levels in Leachates and Condensates from Domestic Wastes in Landfill Sites. *Journal of the Chartered Institution of Water and Environmental Management*, 10 (6), 391-398.

UNSCEAR (1988) United Nations Scientific Committee on the Effects of Atomic Radiation, 1988 Report to the General Assembly, Sources and Effects of Ionizing Radiation, U.N.E.77.IX.1 (United Nations, New York).

Attachment D

IN THE CIRCUIT COURT OF ST. LOUIS COUNTY
STATE OF MISSOURI

STATE OF MISSOURI EX REL.)	
ATTORNEY GENERAL CHRIS KOSTER)	
AND MISSOURI DEPARTMENT OF)	
NATURAL RESOURCES,)	
)	
Plaintiff,)	
)	
)	
vs.)	Case No.13SL-CC01088-01
)	
)	
REPUBLIC SERVICES, INC., ET)	
AL,)	
)	
Defendants.)	

HEARING BEFORE JUDGE RAYMOND PRICE (RET.)

August 24, 2016

JULIE HUNDELT, RPR, CCR, CSR
Missouri CCR No. 829
Illinois CSR No. 084-004789

1 high would not be the, would not result from
2 background nuclear testing someplace?

3 MR. PETER PRICE: That's correct.

4 JUDGE PRICE: I mean they're --

5 (MR. PETER PRICE:) (The only other source of)
6 (tritium that's well established is from tritiated)
7 (self-illuminating exit signs.) (These are exit signs)
8 (that were manufactured with little vials of tritium so)
9 (that they illuminate without electricity.)

10 JUDGE PRICE: Sure.

11 (MR. PETER PRICE:) (They've been made since)
12 (the 1950s as I understand.) (They're typically used in)
13 (applications, industrial or warehouse applications)
14 (where there's not electricity readily available.) (And)
15 (over the years, the industry has estimated that some)
16 (3 million of these exit signs have been manufactured)
17 (and used in the United States.)

18 (They're licensed under a general license by)
19 (the Nuclear Regulatory Commission, and that means that)
20 (there's supposed to be a responsible person that's in)
21 (charge of those, of maintaining those signs and)
22 (reporting any repairs, damages, disposal.) (And there's)
23 (rules on how disposal is to take place.)

24 (Well, many of those apparently have made)
25 (their way into municipal or demolition landfills, just)

1 (because tracking has not been adequate.) (Those signs,
2 (many of them were made with as much as 25 curries of
3 (tritium.) (Now that's curries, not pico-curries.) (So
4 (just to --)

5 (JUDGE PRICE: (What's the difference between
6 (curies and pico-curries?) (I'm sure it's a factor of
7 (ten, hundred, thousand --)

8 (MR. PETER PRICE: (A trillion.)

9 (JUDGE PRICE: (A trillion?)

10 (MR. PETER PRICE: (25 curries is equal to 25
11 (trillion pico-curries.) (So there's another number.
12 (Write that out for you.) (So that's a huge
13 (concentration of tritium just in one sign.)

14 (So one sign that may have been disposed in
15 (the landfill can create the numbers that we are seeing
16 (in the leachate.) (And consequently, if we find it in
17 (wells outside of the landfill in concentrations that
18 (is greater than what it natural, greater than what one
19 (would expect to see from the maximum concentration due
20 (to atmospheric testing, it gives us reason to suspect)
21 (that the leachate or the landfill is the source of
22 (that tritium.)

23 (So it, it becomes a very reliable tracer for
24 (landfill leachate.) (We know it's in the leachate.) (We
25 (know there are probably no other reasonable sources)

1 (for the tritium at those levels.) (It's easy, it makes)
2 (it logical to tie the two together.) (And we have --)
3 (now I'm going to show you another map that shows our)
4 (most recent levels of tritium.)

5 JUDGE PRICE: Okay. Since we're getting
6 into a number of maps, I'm going to take those out and
7 start getting them marked I think so we don't have
8 confusion.

9 MS. MERRIGAN: We would appreciate it.

10 (Whereupon, a break was taken off the
11 record.)

12 (Exhibit 1-6, Maps, was marked for
13 identification.)

14 JUDGE PRICE: We can make copies afterwards.
15 Now that we have them marked, we will know what we're
16 talking about. So, Mr. Price, you just handed to me,
17 Deposition Exhibit 2, which is another map that has
18 some colors, that the wells are color-coded. So would
19 you explain the significance of this map?

20 MR. PETER PRICE: There are two colors of
21 highlighting on the monitoring well numbers. The
22 fluorescent yellow are highlights, indicate those
23 wells that we had split samples of in the May 2016
24 sampling event. Beside each of those are the tritium
25 results that we received from those.

1 not interfere with EPA's jurisdiction.

2 And so it does not offer any additional
3 picture as to the conditions off-site, but it offers a
4 real opportunity for misunderstanding the West Lake
5 Area 1 site which is within EPA's jurisdiction, not
6 the State's. Peter did I --

7 MR. DANIEL: I think that's accurate. And I
8 think it also presents an opportunity for there to be
9 inconsistent relief between what the State is asking
10 to do, which is essentially the same as conjunctive
11 relief because they're asking this Court to order us
12 to do something on property that is inside the fence
13 and under EPA's jurisdiction, and I think it raises a
14 substantial risk of jurisdiction.

15 MS. WHIPPLE: Your Honor, I brought, I got
16 copies. I have brought an E-mail from the General
17 Counsel's Office. You can make that an exhibit.
18 EPA's General Counsel's Office regarding the
19 defendant's concern that there could be a
20 jurisdictional problem. There clearly is not.

21 (Exhibit 7, E-Mail from EPA's General
22 Counsel's Office, was marked for
23 identification.)

24 MR. PETER PRICE: If I may respond to that
25 concern, somewhat from the technical standpoint. The

1 tritium is not related to the RIM, what's known as
2 RIM, the Radiologically-Impacted Material of the West
3 Lake Landfill OU1 materials.

4 Tritium does not generate from that
5 material, those radiological, those other radiological
6 isotopes. It is, we believe it is only related to the
7 landfill and the leachate that's in the landfill. And
8 that's why it's a, we feel it's a value. And I'd like
9 to address another concern of yours based upon a
10 comment you made a little while ago.

11 JUDGE PRICE: Certainly.

12 MR. PETER PRICE: About the variability of
13 the numbers that you see.

14 JUDGE PRICE: Yes.

15 MR. PETER PRICE: Most of those values are
16 from wells that are within the bedrock. The flow of
17 groundwater within the bedrock is, is different than
18 in the alluvial setting. We're discussing now the
19 value of collecting samples from wells that are in the
20 alluvium.

21 Alluvium, the groundwater in the alluvium
22 moves in a more uniform manner than in the bedrock.
23 Typically in the bedrock, groundwater is moving
24 through more discreet pathways, fractures, and
25 weathered zones. And that may be why we're seeing

Attachment E

NN. Wastewater Treatment Plant or Treatment Plant. That portion of the POTW which is designed to provide treatment of municipal sewage and industrial waste.

SECTION 2—GENERAL SEWER USE REQUIREMENTS

2.1 Prohibited Discharge Standards

A. General Prohibitions. No User shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes Pass Through or Interference. These general prohibitions apply to all Users of the POTW whether or not they are subject to categorical Pretreatment Standards or any other National, State, or local Pretreatment Standards or Requirements.

B. Specific Prohibitions. No User shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:

(1) Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, wastestreams with a closed-cup flashpoint of less than 140 degrees F (60 degrees C) using the test methods specified in 40 CFR 261.21;

(2) Wastewater having a pH less than 5.0 [or more than ____], or otherwise causing corrosive structural damage to the POTW or equipment;

[Note: The municipality should be aware that the General Pretreatment Regulations at 40 CFR 403.5(b) do not set an upper pH limit, although many municipalities find such a limit necessary or useful. If the municipality wishes to set an upper pH limit, it should insert one in this Section. 40 CFR 261.22 established that wastes discharged with a pH over 12.5 are considered corrosive hazardous wastes and therefore, the POTW would need to comply with applicable requirements under the Resource Conservation and Recovery Act and implementing regulations for Treatment, Storage, and Disposal facilities if such wastes are delivered to the POTW by truck, rail, or dedicated pipe. Accordingly, if the POTW chooses to prohibit discharge of characteristic hazardous wastes, the upper pH limit must be no greater than 12.5.]

(3) Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in Interference [but in no case solids greater than ____ inch(es) (____") or ____ centimeter(s) (____ cm) in any dimension];

(4) Pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause Interference with the POTW;

(5) Wastewater having a temperature greater than [____ degrees F (____ degrees C)], or which will inhibit biological activity in the treatment plant resulting in Interference, but in no case wastewater which causes the temperature at the introduction into the treatment plant to exceed 104 degrees F (40 degrees C);

(6) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause Interference or Pass Through;

(7) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

(8) Trucked or hauled pollutants, except at discharge points designated by [the Superintendent] in accordance with Section 3.4 of this ordinance;

{Note: Discharge prohibitions B.(1) through B.(8) are mandatory National Pretreatment Standards and must be included in the ordinance; discharge prohibitions B.(9) through B.(18) below are optional.}

(9) Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair; {optional}

(10) Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating [the City's] NPDES permit; {optional}

(11) Wastewater containing any radioactive wastes or isotopes except in compliance with applicable State or Federal regulations; {optional}

(12) Storm Water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, Noncontact Cooling Water, and unpolluted wastewater, unless specifically authorized by [the Superintendent]; {optional}

(13) Sludges, screenings, or other residues from the pretreatment of industrial wastes; {optional}

(14) Medical Wastes, except as specifically authorized by [the Superintendent] in an individual wastewater discharge permit [or a general permit {optional}]; {optional}

(15) Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test; {optional}

(16) Detergents, surface-active agents, or other substances which that might cause excessive foaming in the POTW; {optional}

(17) Fats, oils, or greases of animal or vegetable origin in concentrations greater than [() mg/l]; [Note: Numeric limits for these pollutants may be placed in Section 2.4] {optional}

(18) Wastewater causing two readings on an explosion hazard meter at the point of discharge into the POTW, or at any point in the POTW, of more than [_____] percent (____%) or any single reading over [_____] percent (____%) of the Lower Explosive Limit of the meter. {optional}

Pollutants, substances, or wastewater prohibited by this Section shall not be processed or stored in such a manner that they could be discharged to the POTW.

2.2 National Categorical Pretreatment Standards

Users must comply with the categorical Pretreatment Standards found at 40 CFR Chapter I, Subchapter N, Parts 405–471.

[Note: State procedures for incorporation by reference must be followed. EPA regulations at 40 CFR 403.13 authorize a CIU to obtain a variance from a categorical Pretreatment Standard if the CIU can prove, pursuant to the procedural and substantive provisions in 40 CFR 403.13, that factors relating to its discharge are fundamentally different from the factors considered by EPA when developing the categorical Pretreatment Standard. The POTW might need to include a provision authorizing it to incorporate or recognize revised Standards if the User has obtained an FDF variance from EPA on the basis of 40 CFR 403.13. That CIU's Standards would be replaced by the revised FDF variance Standard.]

A. Where a categorical Pretreatment Standard is expressed only in terms of either the mass or the concentration of a pollutant in wastewater, [the Superintendent] may impose equivalent concentration or mass limits in accordance with Section 2.2E and 2.2F. {Optional} [Note: See 40 CFR 403.6(c)]

B. When the limits in a categorical Pretreatment Standard are expressed only in terms of mass of pollutant per unit of production, the [Superintendent] may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual Industrial Users. {Optional} [Note: See 40 CFR 403.6(c)(2)]

C. When wastewater subject to a categorical Pretreatment Standard is mixed with wastewater not regulated by the same Standard, [the Superintendent] shall impose an alternate limit in accordance with 40 CFR 403.6(e).

{Optional}[Note: The following provision may be included in the local ordinance at the municipality's discretion.]

D. A CIU may obtain a net/gross adjustment to a categorical Pretreatment Standard in accordance with the following paragraphs of this Section. [Note: See 40 CFR 403.15]

(1) Categorical Pretreatment Standards may be adjusted to reflect the presence of pollutants in the Industrial User's intake water in accordance with this Section. Any Industrial User wishing to obtain credit for intake pollutants must make application to the [City]. Upon request of the Industrial User, the applicable Standard will be calculated on a "net" basis (i.e., adjusted to reflect credit for



**Metropolitan St. Louis
Sewer District**

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

October 17, 2016

Erin Fanning
Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Discharge Permit No: 1003803000 - 1.3 (Draft Modification)
For premise at: 13570 St. Charles Rock Road,
Bridgeton, MO 63044

Dear Ms. Fanning:

The Metropolitan St. Louis Sewer District recently notified you of its intent to modify Bridgeton Landfill's Industrial Wastewater Discharge Permit for the above premise. The modification is necessary because of new data recently provided to the District.

On September 7, 2016, the Missouri Department of Natural Resources sampled the wastewater discharge from Bridgeton Landfill. Among the results of analytical testing was hydrogen-3 (tritium) at 47,471 pCi/L. While this level is below the Nuclear Regulatory Commission's 10 CFR 20 Appendix B, Table 3 monthly average concentration limit for hydrogen-3 of 10,000,000 pCi/L for releases to sewers by NRC licensees, it does change the circumstances upon which the permit was based. MSD was previously unaware of the presence of hydrogen-3 in the wastewater discharge from Bridgeton Landfill.

The following modifications are being made to the permit:

- Addition of hydrogen-3 (tritium) monitoring requirement to sampling points 013 and 014, with a sampling frequency of once/3 months, and a monthly average discharge limit of 10,000,000 pCi/L
- Effective date of December 1, 2016, with first report under this permit due by January 28, 2016

We have included the entire draft modified permit for your convenience.

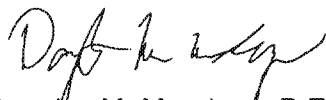
This modification does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 30 days of receipt. MSD will deem absence of a response within this period as acceptance of the draft modified permit, and we will proceed to issue the final modified permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8717, if you have any questions.

Sincerely,

METROPOLITAN ST. LOUIS SEWER DISTRICT

A handwritten signature in dark ink, appearing to read "Doug M. Mendoza".

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosure: Draft Modified Industrial Wastewater Discharge Permit

cc: John Lodderhose
Chris Bulmahn
Ken Goins

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
HAULED & INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.3

EFFECTIVE DATE: December 1, 2016
EXPIRATION DATE: August 31, 2019

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 013, 014

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Chris Bulmahn
Associate Engineer

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS FOR ON SITE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate (Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown (Transfer station & jetter trucks) + Storm Water (Contaminated from leachate spills) + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/mo
Temperature [Deg C]	60	Instant	Once/mo
pH [SU]	11.5	Instant	Once/mo
pH [SU]	5.5	Instant	Once/mo
Transmittance Unfiltered	****	Daily Avg	Once/mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10,000,000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3,000	Monthly Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.77	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only

DRAFT

DISCHARGE LIMITATIONS FOR HAULED WASTE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 014

SAMPLING POINT LOCATION: Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate(Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown(Transfer station & jetter trucks)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/mo
Chemical Oxygen Demand	****	Daily Avg	Once/mo
Total Suspended Solids	****	Daily Avg	Once/mo
Temperature	****	Daily Avg	Once/mo
pH	****	Daily Avg	Once/mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Hydrogen-3 (Tritium) [pci/L]	10,000,000	Monthly Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3,000	Monthly Avg	Once/3 mo
Arsenic (Total)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total)	****	Daily Avg	Once/3 mo
Chromium (Total)	****	Daily Avg	Once/3 mo
Copper (Total)	****	Daily Avg	Once/3 mo
Iron (Total)	****	Daily Avg	Once/3 mo
Lead (Total)	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total)	****	Daily Avg	Once/3 mo
Nickel (Total)	****	Daily Avg	Once/3 mo
Oil and Grease (Total)	****	Daily Avg	Once/3 mo
Silver (Total)	****	Daily Avg	Once/3 mo
Zinc (Total)	****	Daily Avg	Once/3 mo
Total Phenols	****	Daily Avg	Once/3 mo
Total Toxic Organics	****	Daily Avg	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** Monitoring requirement only

DRAFT

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

- Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.
- For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.
- For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- All facility and sample description information required on the District's reporting form.
- Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- Daily flows, with dates, for all measurements or estimates made within the quarter.
- Any certification statements required pursuant to the Special Conditions in Section II.
- Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:

January 1 through March 31

April 1 through June 30

July 1 through September 30

October 1 through December 31

The report must be postmarked no later than:

April 28

July 28

October 28

January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by January 28, 2016.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:

- a. Any discharge from a new process or facility or a new source.
- b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
- c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
- d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
- e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
- f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
- g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written

report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and

shall abide by all of the provisions of District Ordinance 12559 and 13701 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559 and District Hauled Waste Ordinance 13701.

M. NOTIFICATION AND REPORTING

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. On Site Discharge Prohibited Prior to District Approval of Pretreatment Plant

Discharge of wastewater through the on site sewer (sampling point **013**) shall be prohibited prior to the District's declaration of acceptance of the permittee's pretreatment plant operational conditions.

A.2. Untreated or Partially-treated Hauled Discharge

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, only wastewater that has received normal pretreatment to prevent discharge prohibitions and has been discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), is approved by this permit for hauling to District treatment plants and discharge. All other wastewater from the permitted facility that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District) must be approved for discharge separately by the District prior to hauling to District treatment plants and discharging.

Subsequent to the District's declaration of the permittee's pretreatment plant operational acceptance, for all wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point 014 (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.4. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 12559 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.5. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol
2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol

4,6-dinitro-2-methylphenol
2,4-dinitrophenol
2-nitrophenol
4-nitrophenol

pentachlorophenol
phenol
2,4,6-trichlorophenol

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Sampling and Reporting Frequencies

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, the sampling frequency and acceptance procedure for the treated leachate discharge will follow the sampling parameters, frequency, and reporting requirements contained in the District's April 24, 2013 approval and subsequent modifications.

Following the District's declaration of plant acceptance, the permittee's discharge will be sampled for the parameters

listed under sampling point 013 as follows:

1. Once/day for the first 30 calendar days. This sample of fully treated leachate may be collected from an internal sampling point prior to entry into the approved storage tank; however at least the final three samples must be collected from an approved tank.
2. At the end of the 30 day period, if analytical results are obtained for at least the final 7 consecutive days at or below the limits contained in the permit for on site discharge, or in District Ordinance 12559 if not contained in the permit, sampling will continue on a once/week schedule for the next three months.
3. Should analytical results from once/week sampling meet the discharge limits for three consecutive months, sampling will continue at a once/month frequency for the following six months.
4. Should analytical results from once/month sampling meet the discharge limits for six consecutive months, sampling will continue at the frequencies defined in the permit.

Should a sample fail to meet the discharge limit for any parameter, the sampling frequency will revert to the next more frequent sampling interval listed above. Reversion to next more frequent sampling interval shall only apply to the parameter failing to meet its discharge limit. Reversion shall continue for the period specified for the initial sampling frequency reductions.

At least one of the initial once/day samples shall be analyzed for Gross Alpha, Gross Beta, Gross Gamma, Radium-226, Radium-228, and Uranium.

The sampling intervals listed above shall apply to the permittee's discharge regardless of discharge location to the District, whether on site or hauled.

Sample type and reporting frequency shall be as follows:

Sampling Frequency	Sample Type	Reporting Frequency
Once/day (12:00 am to 12:00 am)	Grab or 24-hr composite	Once/week. Reports shall be submitted by noon on each Wednesday and include all operational and laboratory reports received for activity through the previous Saturday.
Once/week (Sunday to Saturday)	24-hr composite	Once/week. Reports shall be submitted within 2 weeks (14 calendar days) of sampling.
Once/calendar month	24-hr composite	Once/month. Reports shall be submitted within 3 weeks (21 calendar days) of sampling.

All grab samples shall be collected in such a manner as to be as representative as possible of the full daily discharge.

This special condition does not relieve the permittee from any violations of the industrial wastewater discharge permit, nor District Ordinance 12559, nor any other applicable District ordinances. Neither does this special condition relieve the permittee from any other obligations of the industrial wastewater discharge permit, District Ordinance 12559, or any other applicable District ordinances.

B.4. Discharge of Contaminated Storm Water

Permittee is authorized to discharge contaminated storm water to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.5. Operation of Westlake Pump Station Air Handling Equipment

Permittee shall continue to maintain and operate the air ventilation, scrubber and 4-gas meter system installed at the District's Westlake Pump Station during discharge of leachate to the pump station. The permittee may suspend operation during cessation of discharge to the pump station. Upon resumption of discharge to the pump station, operation of the air equipment must resume immediately.

B.6. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point 013 (on site) or sampling point 014 (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 011 (NPDES 006), or 012 (NPDES 007). These discharges are subject to State regulation under NPDES permit number MO-0112771. Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to special condition B.4. For storm water that is contaminated with material other than leachate, permittee is authorized to route it to the permittee's pretreatment plant, however should the permittee plan to route it directly to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.4. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.5. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 13758, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling **014** (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **013**. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point **014** (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Variance Limits

Pursuant to the provisions of District Sewer Use Ordinance 12559, Article VI, Section Two, the permittee has been granted a variance to the Ordinance limitations for total arsenic at sampling point 013. The permittee shall comply with the alternative limits specified. The alternative limits are effective for the life of this permit but may be revoked at any time if it is determined that discharge at the variance levels is causing or contributing to interference or pass through as defined in Article II of the Ordinance. The variance will expire upon expiration of this permit unless justification for continuance of the alternative limits is provided by the permittee at the time of application for permit renewal.

THIS IS THE LAST PAGE OF THIS PERMIT

INDUSTRIAL USER SELF MONITORING REPORT PAGE 2

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

O	NO DISCHARGE OF HAZARDOUS HAULED WASTE
	For permit special conditions that prohibit discharge of hazardous waste to the District, you are required to make the following certification: _____ I certify, since the last discharge monitoring report, there has been no discharge of hazardous waste to the District.

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION
	All permittees must sign and complete the information below: I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Print or type name of signing official: _____ Title: _____ Telephone: _____ Signature: _____ Date: _____

DRAFT

①

Document Path: I:\Projects\2018\11014\Map\OUTRAIL Map 9-02-14.mxd

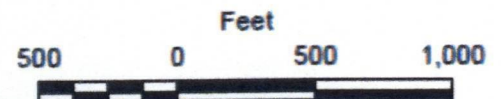


MSD 034549



Legend

- NPDES Outfalls
- MSD Outfalls



BRIDGETON LANDFILL NPDES and MSD Discharge Locations

9/02/2014

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT REVISION

Company Name: BRIDGETON LANDFILL LLC

Premise Address: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Former Permit No: 1003803000-1.2

Original Effective Date: 3/25/2015

Revised Permit No: 1003803000-1.3

Revision Effective Date: 12/1/2016

WHY – Cite regulation, policy, etc. and identify any other documents which support the revision:

Sampling of wastewater discharge by MDNR detected tritium (hydrogen-3) at levels above background. See industry file memo dated 10/10/2016 & other correspondence in month prior.

WHAT – Briefly explain what is to be revised and then list the pages & how affected:

Add tritium monitoring requirement, with associated discharge limit from NRC's 10 CFR 20 Appendix B, Table 3.

WHAT – List the Permit Preparation Checklist questions for which answers have changed from last permit, and complete those questions & attach the applicable checklist sheets:

No changes to specific questions from checklist, only addition of parameter to monitor.

Pg. # 1 New permit number and effective date.

Pg. # 3 & 4 Add Hydrogen-3 (Tritium) once/3 mo monitoring and 10,000,000 pci/L monthly average limit to sample points 013 and 014.

Pg. # 7 For general condition 9, change first report due date to January 28, 2016.

Pg. # _____

Pg. # _____

Pg. # _____

SMR Start Dates for any new requirements:

Once/3 mo: 10/1/2016 or ☐ no new requirements

Once/6 mo: _____ or ☒ no new requirements

Once/year: _____ or ☒ no new requirements

SUPPORTING DOCUMENTS ATTACHED

	YES	NO	N/A
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Permit Preparation Checklist (Only the pages for Q's _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pollutant & Limitations Documentation Sheets (for Sampling Points <u>013, 014</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production-based Standards Calc. Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mass-based Standards Calc. Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Most Strict Limits Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Combined Wastestream Formula Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Text of any Customized Special Conditions: If Yes, for which SCs: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other: _____			

Prepared by: Doug Mendoza Date: 10/14/2016

PERMIT NO: 1003803000-1.3

CHANGES TO

Special Certifications & General Reports for Special Conditions not tied to specific sample points

ADDITIONS: Special Conditions: # _____, # _____, # _____, # _____, # _____
Related SMR Certs: # _____, # _____, # _____, # _____, # _____
SMR Cert Frequency: [none], [none], [none], [none], [none]
Related General Rpt: _____, _____, _____, _____, _____
Gen Rpt Frequency: [none], [none], [none], [none], [none]

Are the ADDITIONAL SMR certs associated with first permit sample point (____)? YES ☐ NO ☐

DELETIONS: Special Conditions: # _____, # _____, # _____, # _____, # _____
Related SMR Certs: # _____, # _____, # _____, # _____, # _____
Related General Rpt: _____, _____, _____, _____, _____

Were the DELETED SMR certs removed from the first permit sample point (____)? YES ☐ NO ☐

Check here if there are no changes to non-SP-specific Special Certifications or General Reports: ☒

SAMPLING POINT REFERENCE NUMBER: 013

Wastewater Components: _____

Flow Rate: _____ Units: _____

Basis for Flow Rate: _____

TYPE: Ord ☒ Cat ☐ Comb ☐NEW SP ☐ or CHANGE to SP ☒

FOR SPs WITH CHANGES, COMPLETE ONLY WHAT HAS CHANGED:

[illegible]

Special Condition:

List related SMR certs:
SMR cert frequency:

List related General Rpts:
General Rpt frequency:

[illegible]

Is this an Ord or Comb SP w/mon for Ord TTO and that has no TOs on site? YES ☐ NO ☐ If Yes, is SMR Gen Cert. A attached at once/3 mo freq.? YES ☐ NO ☐



**Metropolitan St. Louis
Sewer District**

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

October 7, 2016

Erin Fanning
Environmental Manager
BRIDGETON LANDFILL, LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

**RE: NOTICE OF INTENT TO MODIFY BRIDGETON LANDFILL LLC INDUSTRIAL
WASTEWATER DISCHARGE PERMIT NO. 1003803000-1.2**

Dear Ms. Fanning:

As you were recently informed by the Metropolitan St. Louis Sewer District, the Missouri Department of Natural Resources sampled the wastewater discharge from Bridgeton Landfill on September 7, 2016. Among the results of analytical testing was hydrogen-3 (tritium) at 47,471 pCi/L. While this level is below the Nuclear Regulatory Commission's 10 CFR 20 Appendix B, Table 3 monthly average concentration limit for hydrogen-3 of 10,000,000 pCi/L for releases to sewers by NRC licensees, it does change the circumstances upon which the permit was based. MSD was previously unaware of the presence of hydrogen-3 in the wastewater discharge from Bridgeton Landfill.

Bridgeton Landfill's wastewater discharge permit General Condition F provides for modification of the permit when the circumstances upon which the permit was based change. Therefore, MSD intends to modify the permit to add required self-monitoring for hydrogen-3, similar to that already required for radium-226, radium-228, and uranium-natural. MSD also intends to include the NRC's monthly average concentration discharge limit for hydrogen-3 of 10,000,000 pCi/L. This limit is based on criteria to protect the health and safety of people exposed to the wastewater discharge.

MSD will be preparing and sending you a draft modified permit shortly for review. Should you wish to discuss this matter prior to receipt of the draft modified permit or for any other questions, please contact me at 314.436.8717.

Sincerely,

METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

cc: Chris Bulmahn

file-permit files

PRIORITIES	PERFORMANCE	SERVICE
------------	-------------	---------

MSD 034555



**Metropolitan St. Louis
Sewer District**

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

April 6, 2015

Brian Power
Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Discharge Permit No: 1003803000 - 1.1
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Brian Power:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on February 6, 2015, for the above premise, is hereby revised as per the attached revised permit.

The following revisions were made to the permit:

- The description for sampling point 013 has been updated to provide a more specific location, now that construction is complete at the landfill.
- The permit special condition "Special Biochemical Oxygen Demand Limitation" has been amended to provide a mass limit for biochemical oxygen demand specific to when discharge is directed to the Bissell Point Wastewater Treatment Plant.

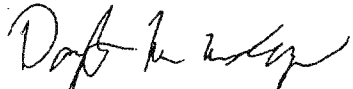
We have reissued the entire permit for your convenience. Please replace your prior permit with this letter and the revised permit. The terms of the revised permit supersede your prior permit.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals.

This revision does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8717, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT


Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosures: Industrial Wastewater Discharge Permit, Self-monitoring Report Form

cc: Chris Bulmahn
Tom Boehm
Cynthia Chalk

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
HAULED & INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.2

EFFECTIVE DATE: March 25, 2015
EXPIRATION DATE: August 31, 2019

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 013, 014

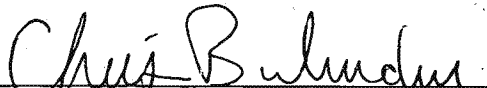
In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

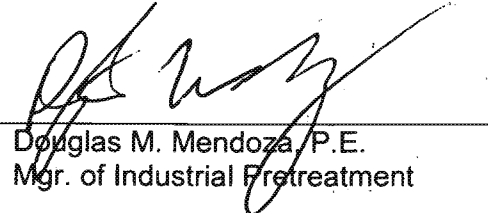
Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT


Chris Bulmahn
Associate Engineer


Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS FOR ON SITE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate (Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown (Transfer station & jetter trucks) + Storm Water (Contaminated from leachate spills) + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	****	Daily Avg	Once/mo
Chemical Oxygen Demand [mg/L]	****	Daily Avg	Once/mo
Total Suspended Solids [mg/L]	****	Daily Avg	Once/mo
Temperature [Deg C]	60	Instant	Once/mo
pH [SU]	11.5	Instant	Once/mo
pH [SU]	5.5	Instant	Once/mo
Transmittance Unfiltered	*****	Daily Avg	Once/mo
Ammonia (as N)	*****	Daily Avg	Once/3 mo
Gross Alpha	*****	Daily Avg	Once/3 mo
Gross Beta	*****	Daily Avg	Once/3 mo
Gross Gamma	*****	Daily Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.77	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only

DISCHARGE LIMITATIONS FOR HAULED WASTE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 014

SAMPLING POINT LOCATION: Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate(Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown(Transfer station & jetter trucks)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/mo
Chemical Oxygen Demand	****	Daily Avg	Once/mo
Total Suspended Solids	****	Daily Avg	Once/mo
Temperature	****	Daily Avg	Once/mo
pH	****	Daily Avg	Once/mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Arsenic (Total)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total)	****	Daily Avg	Once/3 mo
Chromium (Total)	****	Daily Avg	Once/3 mo
Copper (Total)	****	Daily Avg	Once/3 mo
Iron (Total)	****	Daily Avg	Once/3 mo
Lead (Total)	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total)	****	Daily Avg	Once/3 mo
Nickel (Total)	****	Daily Avg	Once/3 mo
Oil and Grease (Total)	****	Daily Avg	Once/3 mo
Silver (Total)	****	Daily Avg	Once/3 mo
Zinc (Total)	****	Daily Avg	Once/3 mo
Total Phenols	****	Daily Avg	Once/3 mo
Total Toxic Organics	****	Daily Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published

limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** Monitoring requirement only

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- a. All facility and sample description information required on the District's reporting form.
- b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- c. Daily flows, with dates, for all measurements or estimates made within the quarter.
- d. Any certification statements required pursuant to the Special Conditions in Section II.
- e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:

January 1 through March 31

April 1 through June 30

July 1 through September 30

October 1 through December 31

The report must be postmarked no later than:

April 28

July 28

October 28

January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by April 28, 2015.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.
2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.
3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:
 - a. Any discharge from a new process or facility or a new source.
 - b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
 - c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
 - d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
 - e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
 - f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
 - g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.
2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written

report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and

shall abide by all of the provisions of District Ordinance 12559 and 13701 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559 and District Hauled Waste Ordinance 13701.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. On Site Discharge Prohibited Prior to District Approval of Pretreatment Plant

Discharge of wastewater through the on site sewer (sampling point **013**) shall be prohibited prior to the District's declaration of acceptance of the permittee's pretreatment plant operational conditions.

A.2. Untreated or Partially-treated Hauled Discharge

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, only wastewater that has received normal pretreatment to prevent discharge prohibitions and has been discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), is approved by this permit for hauling to District treatment plants and discharge. All other wastewater from the permitted facility that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District) must be approved for discharge separately by the District prior to hauling to District treatment plants and discharging.

Subsequent to the District's declaration of the permittee's pretreatment plant operational acceptance, for all wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point 014 (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.4. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 12559 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.5. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Sampling and Reporting Frequencies

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, the sampling frequency and acceptance procedure for the treated leachate discharge will follow the sampling parameters, frequency, and reporting requirements contained in the District's April 24, 2013 approval and subsequent modifications.

Following the District's declaration of plant acceptance, the permittee's discharge will be sampled for the parameters

listed under sampling point 013 as follows:

1. Once/day for the first 30 calendar days. This sample of fully treated leachate may be collected from an internal sampling point prior to entry into the approved storage tank; however at least the final three samples must be collected from an approved tank.
2. At the end of the 30 day period, if analytical results are obtained for at least the final 7 consecutive days at or below the limits contained in the permit for on site discharge, or in District Ordinance 12559 if not contained in the permit, sampling will continue on a once/week schedule for the next three months.
3. Should analytical results from once/week sampling meet the discharge limits for three consecutive months, sampling will continue at a once/month frequency for the following six months.
4. Should analytical results from once/month sampling meet the discharge limits for six consecutive months, sampling will continue at the frequencies defined in the permit.

Should a sample fail to meet the discharge limit for any parameter, the sampling frequency will revert to the next more frequent sampling interval listed above. Reversion to next more frequent sampling interval shall only apply to the parameter failing to meet its discharge limit. Reversion shall continue for the period specified for the initial sampling frequency reductions.

At least one of the initial once/day samples shall be analyzed for Gross Alpha, Gross Beta, Gross Gamma, Radium-226, Radium-228, and Uranium.

The sampling intervals listed above shall apply to the permittee's discharge regardless of discharge location to the District, whether on site or hauled.

Sample type and reporting frequency shall be as follows:

Sampling Frequency	Sample Type	Reporting Frequency
Once/day (12:00 am to 12:00 am)	Grab or 24-hr composite	Once/week. Reports shall be submitted by noon on each Wednesday and include all operational and laboratory reports received for activity through the previous Saturday.
Once/week (Sunday to Saturday)	24-hr composite	Once/week. Reports shall be submitted within 2 weeks (14 calendar days) of sampling.
Once/calendar month	24-hr composite	Once/month. Reports shall be submitted within 3 weeks (21 calendar days) of sampling.

All grab samples shall be collected in such a manner as to be as representative as possible of the full daily discharge.

This special condition does not relieve the permittee from any violations of the industrial wastewater discharge permit, nor District Ordinance 12559, nor any other applicable District ordinances. Neither does this special condition relieve the permittee from any other obligations of the industrial wastewater discharge permit, District Ordinance 12559, or any other applicable District ordinances.

B.4. Discharge of Contaminated Storm Water

Permittee is authorized to discharge contaminated storm water to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.5. Operation of Westlake Pump Station Air Handling Equipment

Permittee shall continue to maintain and operate the air ventilation, scrubber and 4-gas meter system installed at the District's Westlake Pump Station during discharge of leachate to the pump station. The permittee may suspend operation during cessation of discharge to the pump station. Upon resumption of discharge to the pump station, operation of the air equipment must resume immediately.

B.6. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point 013 (on site) or sampling point 014 (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 011 (NPDES 006), or 012 (NPDES 007). These discharges are subject to State regulation under NPDES permit number MO-0112771. Permittee is authorized to discharge storm water contaminated with leachate to the District's sanitary sewer system, subject to special condition B.4. For storm water that is contaminated with material other than leachate, permittee is authorized to route it to the permittee's pretreatment plant, however should the permittee plan to route it directly to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C.4. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.5. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 13758, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling 014 (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 013. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Variance Limits

Pursuant to the provisions of District Sewer Use Ordinance 12559, Article VI, Section Two, the permittee has been granted a variance to the Ordinance limitations for total arsenic at sampling point 013. The permittee shall comply with the alternative limits specified. The alternative limits are effective for the life of this permit but may be revoked at any time if it is determined that discharge at the variance levels is causing or contributing to interference or pass through as defined in Article II of the Ordinance. The variance will expire upon expiration of this permit unless justification for continuance of the alternative limits is provided by the permittee at the time of application for permit renewal.

THIS IS THE LAST PAGE OF THIS PERMIT

INDUSTRIAL USER SELF MONITORING REPORT PAGE 2

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following.
Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

O	NO DISCHARGE OF HAZARDOUS HAULED WASTE For permit special conditions that prohibit discharge of hazardous waste to the District, you are required to make the following certification: _____ I certify, since the last discharge monitoring report, there has been no discharge of hazardous waste to the District.
---	--

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION All permittees must sign and complete the information below: I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Print or type name of signing official: _____ Title: _____ Telephone: _____ Signature: _____ Date: _____
---	--



Legend

- NPDES Outfalls
- MSD Outfalls



500 0 500 1,000
Feet

0.2 0 0.2
Miles



BRIDGETON LANDFILL
NPDES and MSD Discharge Locations

9/02/2014



Doug Mendoza

From: Doug Mendoza
Sent: Friday, March 27, 2015 7:41 AM
To: Ed Galbraith (EGalbraith@barr.com) (EGalbraith@barr.com); Power, Brian
<BPower@republicservices.com> (BPower@republicservices.com)
(BPower@republicservices.com)
Subject: FW: Bridgeton Landfill draft permit revision cover letter 3-2015.docx
Attachments: Bridgeton Landfill draft revised permit 3-25-2015.pdf

Gentlemen,

Below is the cover letter for Bridgeton Landfill's draft revised 3/25/2015 permit. A copy of the draft revised permit also is attached. Note that "Draft" is only written on the first page of the attached draft revised permit copy. The actual draft revised permit has "Draft" written on all pages. The actual cover letter and draft revised permit are being mailed today. Please let us know when you have reviewed it, and if you agree with the draft revised permit or have concerns. We will then either issue the final revised permit or discuss further your concerns.

Sincerely,
Douglas M. Mendoza, P.E.
MSD Industrial Pretreatment Manager

March 27, 2015

Brian Power
Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: Discharge Permit No: 1003803000 - 1.2
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Power:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on February 06, 2015, for the above premise, is being revised as per the attached draft revised permit.

The following revisions were made to the permit:

- The description for sampling point 013 has been updated to provide a more specific location, now that construction is complete at the landfill.
- The permit special condition "Special Biochemical Oxygen Demand Limitation" has been amended to provide a mass limit for biochemical oxygen demand specific to when discharge is directed to the Bissell Point Wastewater Treatment Plant.

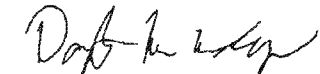
We have reissued the entire permit for your convenience. Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the draft permit, and we will proceed to issue the final permit.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals.

This revision does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8717, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT



Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosures: Industrial Wastewater Discharge Permit, Self-monitoring Report Form

cc: Chris Bulmahn
Tom Boehm



**Metropolitan St. Louis
Sewer District**

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

March 27, 2015

Brian Power
Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Re: **Discharge Permit No: 1003803000 - 1.2**
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Power:

Your Metropolitan St. Louis Sewer District Industrial Wastewater Discharge Permit issued on February 06, 2015, for the above premise, is being revised as per the attached draft revised permit.

The following revisions were made to the permit:

- The description for sampling point 013 has been updated to provide a more specific location, now that construction is complete at the landfill.
- The permit special condition "Special Biochemical Oxygen Demand Limitation" has been amended to provide a mass limit for biochemical oxygen demand specific to when discharge is directed to the Bissell Point Wastewater Treatment Plant.

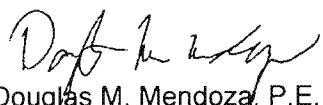
We have reissued the entire permit for your convenience. Please review this draft copy carefully. If you disagree with any of the terms or conditions of the proposed permit please inform us, in writing, within 15 working days of receipt. MSD will deem absence of a response within this period as acceptance of the draft permit, and we will proceed to issue the final permit.

You must submit monitoring reports on a quarterly basis, as required by the conditions of this permit. The necessary report form is appended to the permit. It includes the specific certifications required by your permit. Please use this form for your report submittals.

This revision does not affect any monitoring or analysis of your discharge that may be necessary to comply with other requirements of your permit and in no way relieves you of your obligations to achieve the discharge limitations as provided in the permit.

We appreciate your cooperation and support in helping us to comply with federal regulations. Please contact me at 314.436.8717, if you have any questions.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT


Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

Enclosures: Industrial Wastewater Discharge Permit, Self-monitoring Report Form

cc: Chris Bulmahn
Tom Boehm

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
HAULED & INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 1003803000 - 1.2

EFFECTIVE DATE: March 25, 2015
EXPIRATION DATE: August 31, 2019

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 013, 014

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Chris Bulmahn
Associate Engineer

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS FOR ON SITE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 013

SAMPLING POINT LOCATION: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate (Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown (Transfer station & jetter trucks) + Storm Water (Contaminated from leachate spills) + Cooling Tower Blowdown

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day) [mg/L]	*****	Daily Avg	Once/mo
Chemical Oxygen Demand [mg/L]	*****	Daily Avg	Once/mo
Total Suspended Solids [mg/L]	*****	Daily Avg	Once/mo
Temperature [Deg C]	60	Instant	Once/mo
pH [SU]	11.5	Instant	Once/mo
pH [SU]	5.5	Instant	Once/mo
Transmittance Unfiltered	*****	Daily Avg	Once/mo
Ammonia (as N)	*****	Daily Avg	Once/3 mo
Gross Alpha	*****	Daily Avg	Once/3 mo
Gross Beta	*****	Daily Avg	Once/3 mo
Gross Gamma	*****	Daily Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Arsenic (Total) [mg/L]	0.77	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total) [mg/L]	0.7	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5.0	Daily Avg	Once/3 mo
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Iron (Total) [mg/L]	150	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	0.4	Daily Avg	Once/3 mo
Magnesium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Mercury (Total) [mg/L]	0.01	Daily Avg	Once/3 mo
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Silver (Total) [mg/L]	0.5	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3.0	Daily Avg	Once/3 mo
Total Phenols [mg/L]	21.0	Instant	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/3 mo

- * Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.
- ** See Section I.A.2 of the permit conditions.
- *** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.
- **** See Section I.A.11 of the permit conditions.
- ***** Monitoring requirement only

DRAFT

DISCHARGE LIMITATIONS FOR HAULED WASTE DISCHARGE

SAMPLING POINT REFERENCE NUMBER: 014

SAMPLING POINT LOCATION: Truck loading stations at 316K gallon equalization tank or 1 M gallon biological treatment tanks

AVERAGE WASTEWATER FLOW (GPD): 314,769

WASTEWATER SOURCE AND CATEGORY: Landfill Leachate(Including byproducts from underground thermal event & gas condensate) + Plant & Equipment Washdown(Transfer station & jetter trucks)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Flow [GPD]	***	Daily Avg	***
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/mo
Chemical Oxygen Demand	****	Daily Avg	Once/mo
Total Suspended Solids	****	Daily Avg	Once/mo
Temperature	****	Daily Avg	Once/mo
pH	****	Daily Avg	Once/mo
Ammonia (as N)	****	Daily Avg	Once/3 mo
Gross Alpha	****	Daily Avg	Once/3 mo
Gross Beta	****	Daily Avg	Once/3 mo
Gross Gamma	****	Daily Avg	Once/3 mo
Radium-226 [pci/L]	600	Monthly Avg	Once/3 mo
Radium-228 [pci/L]	600	Monthly Avg	Once/3 mo
Uranium (Total) [mg/L]	*****	Daily Avg	Once/3 mo
Uranium-natural [pci/L]	3000	Monthly Avg	Once/3 mo
Arsenic (Total)	****	Daily Avg	Once/3 mo
Benzene [mg/L]	0.14	Instant	Once/3 mo
Cadmium (Total)	****	Daily Avg	Once/3 mo
Chromium (Total)	****	Daily Avg	Once/3 mo
Copper (Total)	****	Daily Avg	Once/3 mo
Iron (Total)	****	Daily Avg	Once/3 mo
Lead (Total)	****	Daily Avg	Once/3 mo
Magnesium (Total)	****	Daily Avg	Once/3 mo
Mercury (Total)	****	Daily Avg	Once/3 mo
Nickel (Total)	****	Daily Avg	Once/3 mo
Oil and Grease (Total)	****	Daily Avg	Once/3 mo
Silver (Total)	****	Daily Avg	Once/3 mo
Zinc (Total)	****	Daily Avg	Once/3 mo
Total Phenols	****	Daily Avg	Once/3 mo
Total Toxic Organics	****	Daily Avg	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical and radiological standards. See Section II of the permit conditions for explanation of any adjustments to the published

limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** Monitoring requirement only

DRAFT

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the **INSTANT** limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the **INSTANT** limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, **shall be made on-site at the points of discharge** and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be **Grab Samples**.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.

a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.

b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:

- All facility and sample description information required on the District's reporting form.
- Analytical results, with dates and times, for all analyzed samples collected within the quarter.
- Daily flows, with dates, for all measurements or estimates made within the quarter.
- Any certification statements required pursuant to the Special Conditions in Section II.
- Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of: The report must be postmarked no later than:

January 1 through March 31

April 28

April 1 through June 30

July 28

July 1 through September 30

October 28

October 1 through December 31

January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by April 28, 2015.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:

- a. Any discharge from a new process or facility or a new source.
- b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
- c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
- d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
- e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
- f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
- g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written

report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:

- a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
- b. There are no feasible alternatives to the bypass; and
- c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:

- a. A violation of any term or condition of this permit.
- b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and

shall abide by all of the provisions of District Ordinance 12559 and 13701 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559 and District Hauled Waste Ordinance 13701.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at (314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. PROHIBITED DISCHARGES

A.1. On Site Discharge Prohibited Prior to District Approval of Pretreatment Plant

Discharge of wastewater through the on site sewer (sampling point **013**) shall be prohibited prior to the District's declaration of acceptance of the permittee's pretreatment plant operational conditions.

A.2. Untreated or Partially-treated Hauled Discharge

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, only wastewater that has received normal pretreatment to prevent discharge prohibitions and has been discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there) is approved by this permit for hauling to District treatment plants and discharge. All other wastewater from the permitted facility that the permittee wishes to discharge through sampling point **014** (or otherwise haul to the District) must be approved for discharge separately by the District prior to hauling to District treatment plants and discharging.

Subsequent to the District's declaration of the permittee's pretreatment plant operational acceptance, for all wastewater that has not received full treatment through the permittee's pretreatment plant and that the permittee wishes to discharge through sampling point 014 (or otherwise haul to the District), the permittee shall give prior notification to the District and shall follow the applicable requirements for the District's April 24, 2013 approval and subsequent modifications.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

A.4. Discharge Prohibited or Restricted to Protect District

Discharge of wastewater to particular District treatment plants shall be prohibited when the District so declares those plants as prohibited from receiving the permittee's wastewater. Alternately, discharge of wastewater to particular District treatment plants may be restricted by the District to certain volume or loading restrictions. Such declarations shall not be made by the District without cause, such as to prevent violations by the permittee of District Ordinance 12559 or other applicable ordinances.

Of particular note:

1. Discharge of wastewater to the District's Missouri River treatment plant shall be prohibited or limited when the permittee's wastewater has an ultraviolet transmittance percentage at a level that would interfere with proper ultraviolet disinfection at the treatment plant. At a minimum, from the first day of March through the last day of October in a calendar year, discharge to the treatment plant will be prohibited or limited.

2. Discharge of wastewater to any of the District's treatment plants shall be prohibited or limited when the permittee's wastewater has a biochemical oxygen demand concentration at a level that would interfere with proper biological treatment at the treatment plants.

A.5. Hazardous Hauled Wastes

Pursuant to District Ordinance 13701, Section 2.B, under no circumstance may hauled waste which is hazardous waste, as defined in 40 CFR 261 or 10 CSR 25-4.261, be discharged to District facilities. The permittee shall certify on each quarterly self-monitoring report that the permittee has not discharged any hazardous hauled waste.

B. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

B.1. Sampling/Reporting Requirement for Ordinance Total Phenols

Analysis for Total Phenols is to be performed using EPA Method 625. The result to be reported is the arithmetic sum of the concentrations found for the following individual phenolic compounds:

4-chloro-3-methylphenol	4,6-dinitro-2-methylphenol	pentachlorophenol
2-chlorophenol	2,4-dinitrophenol	phenol
2,4-dichlorophenol	2-nitrophenol	2,4,6-trichlorophenol
2,4-dimethylphenol	4-nitrophenol	

As an option, prior to performing the Method 625 analysis, an initial screening may be performed using EPA Method 420.1. If this option is chosen, two separate samples must be collected, one preserved for the method 420.1 analysis and one unpreserved for a method 625 analysis, if necessary. If the screening produces a result which is less than the permit limitation for Total Phenols, the result should be reported as "less than (numerical result)", and the Method 625 analysis need not be performed. If Method 420.1 produces a result which is greater than the permit limitation, the unpreserved sample must be analyzed using Method 625 and the Method 625 result must be reported. Note: The screening analysis must be completed and a result obtained within sufficient time to ensure the Method 625 analysis, if required, can begin within the 7 day holding time of the unpreserved sample.

B.2. Sampling/Reporting Requirement for Total Toxic Organics

The permittee shall sample and report Total Toxic Organics using at a minimum EPA Methods 624 and 625, or equivalent. Other EPA Methods may be necessary to analyze for toxic organics which are or may be present in the discharge. As part of the Total Toxic Organics report, the permittee shall report all volatile and semi-volatile organics which EPA methods 624 and 625, or equivalent, scan for, as well as all organics which other methods used scan for, and the sum of all quantifiable values greater than 0.01 mg/l.

B.3. Sampling and Reporting Frequencies

Prior to the District's declaration of the permittee's pretreatment plant operational acceptance, the sampling frequency and acceptance procedure for the treated leachate discharge will follow the sampling parameters, frequency, and reporting requirements contained in the District's April 24, 2013 approval and subsequent modifications.

Following the District's declaration of plant acceptance, the permittee's discharge will be sampled for the parameters

listed under sampling point 013 as follows:

1. Once/day for the first 30 calendar days. This sample of fully treated leachate may be collected from an internal sampling point prior to entry into the approved storage tank; however at least the final three samples must be collected from an approved tank.
2. At the end of the 30 day period, if analytical results are obtained for at least the final 7 consecutive days at or below the limits contained in the permit for on site discharge, or in District Ordinance 12559 if not contained in the permit, sampling will continue on a once/week schedule for the next three months.
3. Should analytical results from once/week sampling meet the discharge limits for three consecutive months, sampling will continue at a once/month frequency for the following six months.
4. Should analytical results from once/month sampling meet the discharge limits for six consecutive months, sampling will continue at the frequencies defined in the permit.

Should a sample fail to meet the discharge limit for any parameter, the sampling frequency will revert to the next more frequent sampling interval listed above. Reversion to next more frequent sampling interval shall only apply to the parameter failing to meet its discharge limit. Reversion shall continue for the period specified for the initial sampling frequency reductions.

At least one of the initial once/day samples shall be analyzed for Gross Alpha, Gross Beta, Gross Gamma, Radium-226, Radium-228, and Uranium.

The sampling intervals listed above shall apply to the permittee's discharge regardless of discharge location to the District, whether on site or hauled.

Sample type and reporting frequency shall be as follows

Sampling Frequency	Sample Type	Reporting Frequency
Once/day (12:00 am to 12:00 am)	Grab or 24-hr composite	Once/week. Reports shall be submitted by noon on each Wednesday and include all operational and laboratory reports received for activity through the previous Saturday.
Once/week (Sunday to Saturday)	24-hr composite	Once/week. Reports shall be submitted within 2 weeks (14 calendar days) of sampling.
Once/calendar month	24-hr composite	Once/month. Reports shall be submitted within 3 weeks (21 calendar days) of sampling.

All grab samples shall be collected in such a manner as to be as representative as possible of the full daily discharge.

This special condition does not relieve the permittee from any violations of the industrial wastewater discharge permit, nor District Ordinance 12559, nor any other applicable District ordinances. Neither does this special condition relieve the permittee from any other obligations of the industrial wastewater discharge permit, District Ordinance 12559, or any other applicable District ordinances.

B.4. Discharge of Contaminated Storm Water

Permittee is authorized to discharge contaminated storm water to the District's sanitary sewer system, subject to the requirements contained in the District-approved April 14, 2014 version of the Protocol for Discharge of Contaminated Stormwater, and subsequent modifications.

B.5. Operation of Westlake Pump Station Air Handling Equipment

Permittee shall continue to maintain and operate the air ventilation, scrubber and 4-gas meter system installed at the District's Westlake Pump Station during discharge of leachate to the pump station. The permittee may suspend operation during cessation of discharge to the pump station. Upon resumption of discharge to the pump station, operation of the air equipment must resume immediately.

B.6. Additional Hauled Waste Requirements

The District retains the authority to add other analytical and discharge control requirements for hauled waste loads, as deemed necessary, without making a formal modification to the discharge permit.

C. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

C.1. Notification of Change Between On Site and Hauled Discharge

Whenever the permittee becomes aware of its need or desire to change discharge method between sampling point 013 (on site) or sampling point 014 (hauled), or to change distribution between the two methods if both methods are being utilized simultaneously, permittee must immediately notify the District of such need or desire.

C.2. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 004 (NPDES 003), 009 (NPDES 004), 010 (NPDES 005), 011 (NPDES 006) or 012 (NPDES 007). These discharges are subject to State regulation under NPDES permit number MO-0112771. Should the permittee plan to reroute any portion of the flow currently discharged under the NPDES permit to District sewers, the permittee shall notify the District's Division of Environmental Compliance at least ten (10) days prior to the date of the planned change.

C.3. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

- (1) For materials subject to licensing by the Nuclear Regulatory Commission:
 - 5 curies Hydrogen-3
 - 1 curie Carbon-14
 - 1 curie for all other radioactive materials combined
- (2) For all other materials:
 - 1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for

disposal of radioactive material by release into sanitary sewage.

C.4. Radioactive Uranium Reporting Requirements

For the purposes of this permit, measurement and reporting of Uranium-natural for radioactivity levels shall consist of the summation of Uranium-234, Uranium-235, and Uranium-238 isotopes.

C.5. Repeated Submittal of Already-Submitted Analytical

For any sampling analytical results submitted prior to the required quarterly self-monitoring report, permittee need not repeat those results on the quarterly self-monitoring report.

D. SPECIAL BILLING REPORTING REQUIREMENTS

D.1. Hauled Waste Discharge Fees

Following the District's declaration of the permittee's pretreatment plant operational acceptance, for wastewater that has received approved pretreatment and is discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there), the permittee will be billed at a rate of \$0.02/gallon.

For wastewater that has received partial treatment pursuant to Alternative 3 of the Revised Leachate SOP approved August 22, 2014, and any subsequent modifications, MSD will calculate volume and surcharge rates under Ordinance 13758, Appendix 1 using monthly average levels for BOD and TSS. The permittee will be billed this rate except that in no case will the permittee be charged more than provided for in Ordinance 13701 or its successors, presently \$0.08/gallon, or less than \$0.02/gallon.

In addition, the permittee also will be billed all additional fees and charges incurred by the District (including, wages, salaries, benefits, and operational costs) in receiving wastewater from the permittee discharged through sampling 014 (or otherwise hauled to the District) at times other than during normal business hours as defined in District Ordinance 13701.

D.2. Reporting Wastewater Discharged On Site

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 013. These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.3. Reporting Hauled Wastewater Discharge

For billing purposes, the permittee shall submit monthly reports of the volume of wastewater discharged through sampling point 014 (that is, hauled directly to District treatment plants and discharged there). These reports shall be sent to:

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Ave.
St. Louis, MO 63147

Alternately, the reports may be submitted electronically via mutually-agreed method. The reports shall be sent within 15 days of the end of each month. For each month in which no discharge occurs, the permittee shall submit a report stating that no discharge occurred. Permittee may also be required to submit additional information or reports, to ensure compliance with MSD ordinances or with applicable State and Federal regulations. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

D.4. BOD in Lieu of COD for Extra-Strength Surcharges

Upon submittal by the permittee, and acceptance by the District, of data indicating that although the BOD/COD (biochemical oxygen demand / chemical oxygen demand) ratio of the permittee's wastewater is less than 0.35, BOD is more representative of the user's actual wastewater strength and the COD in the wastewater discharge does not receive further treatment and reduction by the District beyond that commensurate with the associated BOD in the wastewater discharge, the District will calculate applicable extra-strength surcharges using BOD values in lieu of COD values.

E. DISCHARGE DAMAGES

E.1. Revocation of Hauled Waste Permit

This permit has been issued based upon the information and sample analysis provided by the permittee. The permit may be revoked by the District at any time if any submitted information is found to be incorrect, the discharges cause any operational or maintenance problems with the District's treatment system, or if the conditions and requirements of the permit are violated.

E.2. Responsibility of Damages from Hauled Waste

If any discharge by the permittee causes any operational or maintenance problems within the District's collection or treatment systems or results in violations of any conditions of the District's NPDES permit, the permittee will be responsible for damages, in accordance with applicable District ordinances or other applicable laws.

F. DERIVATION OF LIMITATIONS

F.1. Variance Limits

Pursuant to the provisions of District Sewer Use Ordinance 12559, Article VI, Section Two, the permittee has been granted a variance to the Ordinance limitations for total arsenic at sampling point 013. The permittee shall comply with the alternative limits specified. The alternative limits are effective for the life of this permit but may be revoked at any time if it is determined that discharge at the variance levels is causing or contributing to interference or pass through as defined in Article II of the Ordinance. The variance will expire upon expiration of this permit unless justification for continuance of the alternative limits is provided by the permittee at the time of application for

Permit No.:	1003803000 - 1.2
Page No.:	17
Effective Date:	March 25, 2015

permit renewal.

THIS IS THE LAST PAGE OF THIS PERMIT

DRAFT

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: **BRIDGETON LANDFILL LLC**

Permit No: 1003803000 – 1.1 Effective Date: March 25, 2015 Expiration Date: August 31, 2019

Premise Address: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Monitoring Period: ☐ (JAN-MAR) ☐ (APR-JUNE) ☐ (JULY-SEPT) ☐ (OCT-DEC)

Samples Collected By: _____

Analyses Performed By: _____

PART II: ANALYTICAL RESULTS OF SELF MONITORING

[illegible]

You must complete and sign the certification statements on the second page.

PART III: SPECIAL CERTIFICATION STATEMENTS

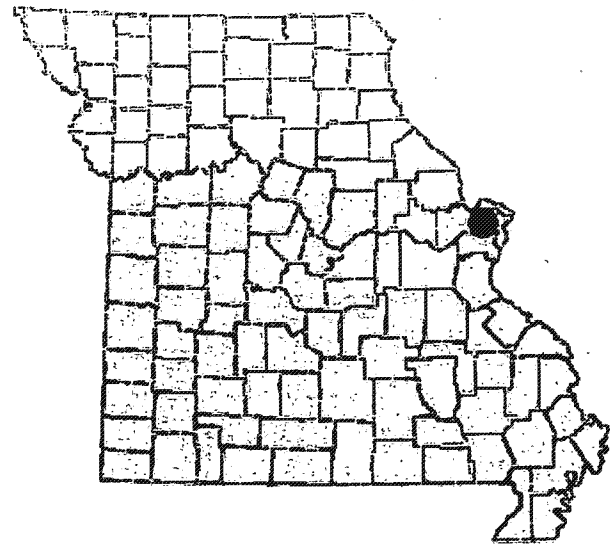
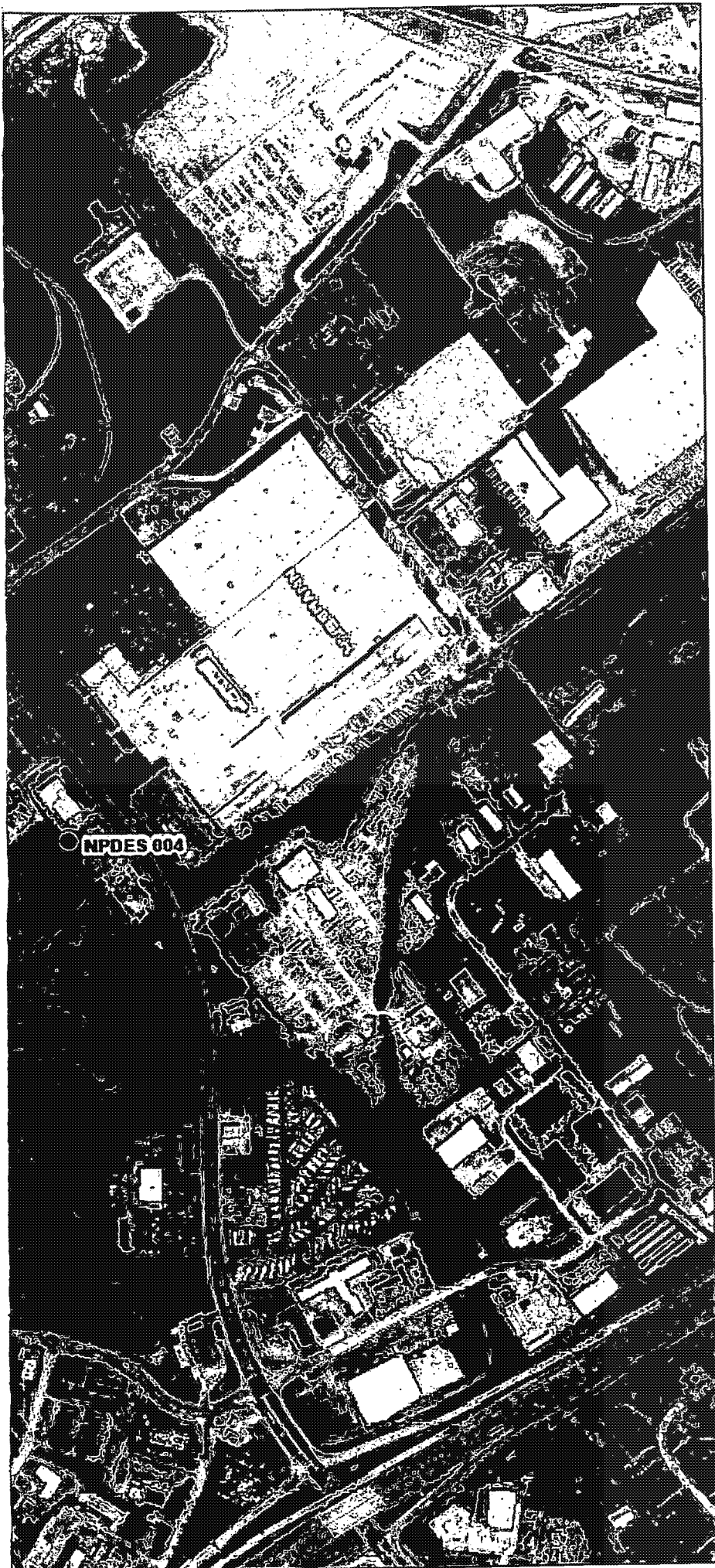
Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

O	NO DISCHARGE OF HAZARDOUS HAULED WASTE
For permit special conditions that prohibit discharge of hazardous waste to the District, you are required to make the following certification:	
_____ I certify, since the last discharge monitoring report, there has been no discharge of hazardous waste to the District.	

PART IV: GENERAL CERTIFICATION STATEMENTS

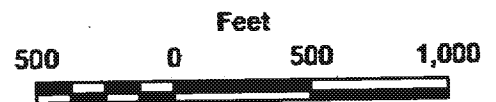
B	DISCHARGE MONITORING REPORT CERTIFICATION
All permittees must sign and complete the information below:	
I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
Print or type name of signing official: _____	
Title: _____ Telephone: _____	
Signature: _____ Date: _____	





Legend

- NPDES Outfalls
- MSD Outfalls



BRIDGETON LANDFILL
NPDES and MSD Discharge Locations

9/02/2014

METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

DOCUMENTATION FORM for PERMIT REVISION

Company Name: BRIDGETON LANDFILL LLC

Premise Address: 13570 St. Charles Rock Road

Former Permit No: 1003803000 - 1.1

Original Effective Date: 9/1/2014

Revised Permit No: 1003803000 - 1.2

Revision Effective Date: 3/25/2015

WHY – Cite regulation, policy, etc. and identify any other documents which support the revision:

1 - Replace SP013 description with one that more accurately describes location.

2 - Allow a higher BOD mass discharge for wastewater discharges that go to Bissell Point STP.

WHAT – Briefly explain what is to be revised and then list the pages & how affected:

1 - Change the written description of SP013 in the permit.

2 - Replace Special Condition A.3 "Special Biochemical Oxygen Demand Limitation" with revised version.

WHAT – List the Permit Preparation Checklist questions for which answers have changed from last permit, and complete those questions & attach the applicable checklist sheets:

Q.29

Pg. # 1 New permit number and effective date

Pg. # 2 New description of location for SP013

Pg. # 11 New (revised) special condition A.3

SMR Start Dates for any new requirements:

Once/3 mo: _____ or ☒ no new requirements

Once/6 mo: _____ or ☒ no new requirements

Once/year: _____ or ☐ no new requirements

SUPPORTING DOCUMENTS ATTACHED

	YES	NO	N/A
"Special Certs & Gen Rpts for Spec Conditions not tied to Specific SPs" Sheet:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Permit Preparation Checklist (Only the pages for Q's <u>29</u>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pollutant & Limitations Documentation Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Production-based Standards Calc. Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mass-based Standards Calc. Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Most Strict Limits Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Combined Wastestream Formula Sheets (for Sampling Points _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Text of any Customized Special Conditions: If Yes, for which SCs: <u>A.3</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____			

Prepared by: Doug Mendoza Date: 3/25/2015

CHANGES TO

Special Certifications & General Reports for Special Conditions not tied to specific sample points

ADDITIONS: Special Conditions: # _____, # _____, # _____, # _____, # _____

Related SMR Certs: # _____, # _____, # _____, # _____, # _____

SMR Cert Frequency: [none], [none], [none], [none], [none]

Related General Rpt: [none], [none], [none], [none], [none]

Gen Rpt Frequency: [none], [none], [none], [none], [none]

Are the ADDITIONAL SMR certs associated with first permit sample point (____)? YES ☐ NO ☐

DELETIONS: Special Conditions: # _____, # _____, # _____, # _____, # _____

Related SMR Certs: # _____, # _____, # _____, # _____, # _____

Related General Rpt: _____, _____, _____, _____, _____

Were the DELETED SMR certs removed from the first permit sample point (____)? YES ☐ NO ☐

Check here if there are no changes to non-SP-specific Special Certifications or General Reports: ☒

16. Does user have any discharges subject to NPDES permitting regulations? Yes ☐ No ☐
 If yes, list MSD points & corresponding NPDES points: _____
 If yes, Special Condition E.14 applies.
17. Do any SPs convey stormwater in addition to regulated wastewater? Yes ☐ No ☐
 If yes, list points: _____ and note on P&LD sheets.
 If yes, Special Condition D.10 applies.
18. Are any SPs Dry Justified in PIMS? Yes ☐ No ☐
 If yes, list points _____ and note on P&LD sheets.
 If yes, no self-monitoring is required, and Special Condition E.3 applies.
19. Are there SPs where user discharges only non-process wastewater? Yes ☐ No ☐
 If yes, does no self-monitoring requirement / Special Condition E.3 apply? Yes ☐ No ☐
 If yes, list points _____ and note on P&LD sheets.
20. Are there SPs with infrequent discharges that require coordination with the user for MSD to collect samples? Yes ☐ No ☐
 If yes, list points: _____ and note on P&LD sheets.
 If yes, Special Condition D.14 applies.
21. Is documentation adequate to allow use of grab samples in lieu of composites at any SPs? Yes ☐ No ☐
 If yes, list points _____ and note on P&LD sheets.
 If yes, Special Condition D.1 applies.
22. Are there SPs with self-monitoring requirements, but at less than a quarterly frequency, for all parameters? Yes ☐ No ☐
 If yes, list points _____ and note on P&LD sheets.
 If yes, Special Condition E.4 applies.
23. Can local limits TTO be removed from monitoring at any ordinance SPs? Yes ☐ No ☐
 If yes, list points _____ and explain on P&LD sheets.
 If yes, does TTO also need to be removed from MSD's monitoring? Yes ☐ No ☐
 If yes, discuss with inspector (name: _____) and explain why it had been monitored by MSD:
24. Does user have a history of compliance problems at this or a previous location? Yes ☐ No ☐
 If yes, explain problems: _____
 If yes, is a compliance schedule required? Yes ☐ No ☐
 If yes, Special Condition G.1 applies.
 Is supporting documentation attached? Yes ☐ No ☐
 If yes, are any other special requirements required? Yes ☐ No ☐
 Explain: _____
25. Is user required to monitor for Total Phenols at an ordinance SP? Yes ☐ No ☐
 If yes, does Special Condition D.3 for Total Phenols monitoring options apply? Yes ☐ No ☐
26. Has user chosen to employ continuous monitoring techniques for:
 pH? If yes, list points _____. SC E.29 & Gen Rpt "Cont-Mon pH Excursions" apply. Yes ☐ No ☐
 Temp? If yes, list points _____. SC E.30 & Gen Rpt "Cont-Mon Temp Excursions" apply. Yes ☐ No ☐
 LEL? If yes, list points _____. SC E.31 & Gen Rpt "Cont-Mon LEL Excursions" apply. Yes ☐ No ☐
 If yes for pH or Temp, have corresponding SP limits in PIMS been set to 'Alert Only' and does PIMS Monitoring Special Instructions have notes re. field 'violations'? Yes ☐ No ☐
27. Does the company perform any processes for which summaries of activities are needed? Yes ☐ No ☐
 If yes, Special Condition E.33 & General Report "Process Activity Summary" apply.
28. Are special billing conditions, other than the standard Special Conditions, needed? Yes ☐ No ☐
 If yes, describe: _____
 If yes, Special Condition F.4 applies.
 Does General Report "Discharge Volume for Billing" apply? Yes ☐ No ☐
 Does General Report "Custom Non-Standard" apply? Yes ☐ No ☐
29. Are any Special Conditions, other than the standard special conditions, required? Yes ☒ No ☐
 If yes, explain: Separate mass discharge limit for BOD - revised to add distinct limit for discharges to Bissell Point STP.
 Which Special Condition applies? B.10 (permit A.3, revised)
 Is supporting documentation attached? Yes ☒ No ☐
 If no, explain: _____
 Does General Report "Custom Non-Standard" apply? Yes ☐ No ☒
30. Is user a hauled waste industry, discharging its wastewater at the Hauled Waste Station? Yes ☐ No ☐
 If yes, have permit title, cover page language, & general conditions been modified? Yes ☐ No ☐
 If yes, Special Conditions B.9, D.13, H.1, and H.2 apply.
31. Is user classified as a Categorical Industrial User (CIU)? Yes ☐ No ☐

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, March 26, 2015 10:02 AM
To: 'Ed Galbraith'
Subject: RE: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Yes, I have received your response.

From: Ed Galbraith [mailto:EGalbraith@barr.com]
Sent: Thursday, March 26, 2015 10:02 AM
To: Doug Mendoza
Subject: FW: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Please reply to confirm receipt. Thanks!

Ed Galbraith

Senior Environmental Consultant
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com
www.barr.com

resourceful. naturally.



From: Ed Galbraith
Sent: Wednesday, March 25, 2015 9:59 AM
To: 'Doug Mendoza'; John Lodderhose; Kamp, Kevin (kkamp@cecinc.com); Power, Brian
<BPower@republicservices.com> (BPower@republicservices.com) (BPower@republicservices.com)
Subject: RE: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Doug, we are good with this change. Thank you.

Ed Galbraith

Senior Environmental Consultant
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com
www.barr.com

resourceful. naturally.



From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]

Sent: Wednesday, March 25, 2015 9:05 AM

To: John Lodderhose; Kamp, Kevin (kkamp@cecinc.com); Power, Brian <BPower@republicservices.com> (BPower@republicservices.com) (BPower@republicservices.com)

Cc: Ed Galbraith

Subject: FW: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Sorry, forgot to hit "reply all" option.

From: Doug Mendoza

Sent: Wednesday, March 25, 2015 9:02 AM

To: 'Ed Galbraith'

Subject: RE: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Ed,

The requested levels are acceptable. However, we have revised the organization of the special condition to provide greater clarity. Note also that the hourly discharge level applies in addition to the daily discharge level when directed to the Bissell Point plant, not as an alternative "or" option. Otherwise, the complying with only hourly discharge level would allow up to 39,600 lb/day. We also have retained the phrase "at any time." There is no reason for it to need to be removed.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

For your information, the 20,000 lb/day level was arrived at by MSD considering several factors: past BOD levels in leachate hauled to the Bissell Point plant when operational problems were encountered, adding a safety factor, and combination of Bridgeton Landfill's wastewater with Lambert-St. Louis International Airport's wastewater in the same MSD trunk sewer. The airport has a separate BOD mass limitation to control loadings from its deicing operations, and the combined strength from both industrial users must be considered to guard against septic conditions occurring in the trunk sewer or downstream pump stations.

We also plan to update the description for sampling point 013. Now that construction is complete at the landfill, we are able to give a more specific location.

- Old Sampling Point 013 description: Manhole immediately upstream of junction manhole to pump stations for Missouri River plant, or for sewer extension line to other MSD treatment plants

- New Sampling Point 013 description: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

Please let us know if you have concerns regarding the above items.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT
Douglas M. Mendoza, P.E.
Industrial Pretreatment Manager

From: Ed Galbraith [mailto:EGalbraith@barr.com]
Sent: Tuesday, March 24, 2015 1:53 PM
To: Doug Mendoza
Cc: John Lodderhose; bpower@republicservices.com; Kamp, Kevin
Subject: FW: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Mr. Doug Mendoza
Industrial Pretreatment Manager
Metropolitan St. Louis Sewer District
10 East Grand Ave.
St. Louis, MO 63147

RE: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Per your recent conversation with Kevin Kamp of CEC Consultants, Bridgeton Landfill is requesting a modification of its discharge permit (1003803000), Special Condition A3 to amend the mass limit for biochemical oxygen demand when discharging to the Bissell Point Wastewater Treatment Plant. We offer the following specific language for your consideration:

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, ~~at any time~~, wastewater with a daily mass of greater than 4,300 lb/day biochemical oxygen demand ~~for any discharge that is directed to the Missouri River or Coldwater Creek Wastewater Treatment Plants.~~

For discharges directed to the Bissell Point Wastewater Treatment Plant through sample point 013, the permittee shall not exceed a discharge of 20,000 lb/day or 1,650 lb/hour biochemical oxygen demand.

These limitations in no way give separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

If you have any questions, feel free to contact me at 573-418-5562. If you require a more formal request please let me know. Thank you for your consideration.

Sincerely,

Ed Galbraith

Senior Environmental Consultant
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com
www.barr.com

resourceful. naturally.



Doug Mendoza

PERMIT FILE

Bridgeton Landfill

From: Doug Mendoza
Sent: Wednesday, March 25, 2015 9:02 AM
To: 'Ed Galbraith'
Subject: RE: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Ed,

The requested levels are acceptable. However, we have revised the organization of the special condition to provide greater clarity. Note also that the hourly discharge level applies in addition to the daily discharge level when directed to the Bissell Point plant, not as an alternative "or" option. Otherwise, the complying with only hourly discharge level would allow up to 39,600 lb/day. We also have retained the phrase "at any time." There is no reason for it to need to be removed.

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time:

- For wastewater directed to the District's Missouri River wastewater treatment plant or Coldwater Creek wastewater treatment plant,
 - Daily mass of greater than 4,300 lb/day biochemical oxygen demand
- For wastewater directed to the District's Bissell Point wastewater treatment plant,
 - Hourly mass of greater than 1,650 lb/hour biochemical oxygen demand, and
 - Daily mass of greater than 20,000 lb/day biochemical oxygen demand.

These limitations in no way gives separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

For your information, the 20,000 lb/day level was arrived at by MSD considering several factors: past BOD levels in leachate hauled to the Bissell Point plant when operational problems were encountered, adding a safety factor, and combination of Bridgeton Landfill's wastewater with Lambert-St. Louis International Airport's wastewater in the same MSD trunk sewer. The airport has a separate BOD mass limitation to control loadings from its deicing operations, and the combined strength from both industrial users must be considered to guard against septic conditions occurring in the trunk sewer or downstream pump stations.

We also plan to update the description for sampling point 013. Now that construction is complete at the landfill, we are able to give a more specific location.

- Old Sampling Point 013 description: Manhole immediately upstream of junction manhole to pump stations for Missouri River plant, or for sewer extension line to other MSD treatment plants
- New Sampling Point 013 description: MH 15' NW, 27' SW of the N corner of concrete containment wall for effluent tank along Boenker Lane

Please let us know if you have concerns regarding the above items.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT
Douglas M. Mendoza, P.E.
Industrial Pretreatment Manager

From: Ed Galbraith [mailto:EGalbraith@barr.com]
Sent: Tuesday, March 24, 2015 1:53 PM
To: Doug Mendoza
Cc: John Lodderhose; bpower@republicservices.com; Kamp, Kevin
Subject: FW: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Mr. Doug Mendoza
Industrial Pretreatment Manager
Metropolitan St. Louis Sewer District
10 East Grand Ave.
St. Louis, MO 63147

RE: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Per your recent conversation with Kevin Kamp of CEC Consultants, Bridgeton Landfill is requesting a modification of its discharge permit (1003803000), Special Condition A3 to amend the mass limit for biochemical oxygen demand when discharging to the Bissell Point Wastewater Treatment Plant. We offer the following specific language for your consideration:

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, ~~at any time~~, wastewater with a daily mass of greater than 4,300 lb/day biochemical oxygen demand for any discharge that is directed to the Missouri River or Coldwater Creek Wastewater Treatment Plants.

For discharges directed to the Bissell Point Wastewater Treatment Plant through sample point 013, the permittee shall not exceed a discharge of 20,000 lb/day or 1,650 lb/hour biochemical oxygen demand.

These limitations in no way give separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.

If you have any questions, feel free to contact me at 573-418-5562. If you require a more formal request please let me know. Thank you for your consideration.

Sincerely,

Ed Galbraith

Senior Environmental Consultant
Jefferson City office: 573.638.5024
cell: 573.418.5562

Doug Mendoza

PERMIT FILE

Bridgeton Landfill

From: Ed Galbraith <EGalbraith@barr.com>
Sent: Tuesday, March 24, 2015 1:53 PM
To: Doug Mendoza
Cc: John Lodderhose; bpower@republicservices.com; Kamp, Kevin
Subject: FW: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Mr. Doug Mendoza
Industrial Pretreatment Manager
Metropolitan St. Louis Sewer District
10 East Grand Ave.
St. Louis, MO 63147

RE: REQUEST FOR PERMIT MODIFICATION FOR TOTAL BOD LOADING WHEN DISCHARGING TO BISSELL POINT WASTEWATER TREATMENT PLANT

Per your recent conversation with Kevin Kamp of CEC Consultants, Bridgeton Landfill is requesting a modification of its discharge permit (1003803000), Special Condition A3 to amend the mass limit for biochemical oxygen demand when discharging to the Bissell Point Wastewater Treatment Plant. We offer the following specific language for your consideration:

A.3. Special Biochemical Oxygen Demand Limitation

In addition to complying with all permit and applicable District ordinance prohibitions against the discharge of any pollutant released at a concentration which will cause interference with the operation of the wastewater system, the permittee shall not discharge through sampling point 013, at any time, wastewater with a daily mass of greater than 4,300 lb/day biochemical oxygen demand for any discharge that is directed to the Missouri River or Coldwater Creek Wastewater Treatment Plants.

For discharges directed to the Bissell Point Wastewater Treatment Plant through sample point 013, the permittee shall not exceed a discharge of 20,000 lb/day or 1,650 lb/hour biochemical oxygen demand.

These limitations in no way give separate approval to or reservation for permittee of wastewater discharges with a biochemical oxygen demand above its long term average discharge levels.


If you have any questions, feel free to contact me at 573-418-5562. If you require a more formal request please let me know. Thank you for your consideration.

Sincerely,

Ed Galbraith

Senior Environmental Consultant
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com

To: BRIDGETON LANDFILL LLC [1003803000] file

From: Doug Mendoza 

Date: March 24, 2015

Re: Meeting to discuss proposed Bridgeton Landfill pump station 1 air monitoring plan

On 3/23/15, MSD and Bridgeton Landfill representatives met to discuss Bridgeton Landfill's proposed air monitoring plan for the Bridgeton Landfill pump station 1. MSD listed several concerns, as described by John Lodderhose with Rob Daly input:

- The proposed duration of 3 months needs to be increased to 6 months, to cover seasonal variations. MSD will review results after 3 months, and may shorten the duration if it believes results so warrant.
- The proposed monthly canister sampling plan needs to have its list of analyzed pollutants expanded to include reduced sulfur compounds (including dimethyl sulfide), ammonia, and methane.
- The proposed field sampling plan needs to be expanded to include 4-gas meter compounds O₂, CO, LEL, and H₂S. In addition, the weekly and then biweekly frequencies need to be doubled in duration to cover 6 months.

One item was also noted by MSD regarding the pump station itself:

- After talking with representatives from MDNR about the situation with gas migration and control, the pump station needs to have a forced air ventilation system installed for both the wet well and the valve pit.

Bridgeton Landfill representatives indicated that they would review the concerns and respond accordingly.

To: BRIDGETON LANDFILL LLC [1003803000] file
From: Doug Mendoza
Date: March 20, 2015
Re: Updated rationales for radionuclide discharge limits and alert levels

Radionuclide discharge limits and source/reason:

- Radium-226
 - NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit is 600 pCi/L.
- Radium-228
 - NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit is 600 pCi/L.
- Thorium-230
 - NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit is 1000 pCi/L.
- Uranium-natural
 - NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit is 3000 pCi/L
 - Uranium-natural is defined by NRC as sum of U-234, U-235 & U-238.

Radionuclide alert levels and source/reason:

- Gross Alpha
 - 15 pCi/L
 - 40 CFR 141.66 Drinking Water Regulations, Maximum Contaminant Levels.
- Gross Beta
 - 50 pCi/L
 - Used by EPA as Trigger for additional testing
 - Official level = 4 mrem/yr in 40 CFR 141.66.
- Gross Gamma
 - 50 pCi/L
 - Not specifically regulated.
 - Use same as Gross Beta for comparison.
 - Note that NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit for Potassium-40 is 40,000 pCi/L.
 - Naturally occurring K-40 has been shown to be the source of gamma radiation at Bridgeton Landfill.
- Radium-226
 - 5 pCi/L
 - 40 CFR 141.66 Drinking Water Regulations, Maximum Contaminant Levels (combined Ra-226 & Ra-228).
 - Note that NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit is 600 pCi/L.
- Radium-228
 - 5 pCi/L
 - 40 CFR 141.66 Drinking Water Regulations, Maximum Contaminant Levels (combined Ra-226 & Ra-228).

- Note that NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit is 600 pCi/L.
- Thorium-230
 - 15 pCi/L
 - There are no drinking water maximum contaminant levels.
 - However, Thorium-230 decays by alpha emission, with accompanying gamma radiation. So the Gross Alpha alert level was chosen.
- Uranium (Total)
 - 30 ug/L
 - 40 CFR 141.66 Drinking Water Regulations, Maximum Contaminant Levels.
 - Note that NRC's 10 CFR 20 App. B Table 3 "Releases to Sewers" monthly average concentration limit is 3000 pCi/L (for Uranium-natural).

ACCOUNT NUMBER: 10038030-00

COMPANY NAME: BRIDGETON LANDFILL LLC (R)

CORRESPONDENCE

FROM 06-12-00 THRU 02-06-15

☒ X

CORRESPONDANCE LOCATED
IN OVERFLOW INDUSTRY FILE

Right side

ACCOUNT NUMBER: 0515598-02

COMPANY NAME: Bridgeton Landfill

CORRESPONDENCE

FROM 94 THRU 99



CORRESPONDENCE LOCATED
IN OVERFLOW FILE

ACCOUNT NUMBER: 10038030-00

COMPANY NAME: BRIDGETON LANDFILL LLC (L)

CORRESPONDENCE

FROM 10-28-04 THRU 11-15-16

☒

CORRESPONDANCE LOCATED
IN OVERFLOW INDUSTRY FILE

Left side

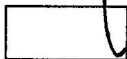
ACCOUNT NUMBER:

0511-5598-02
BRIDGETON LANDFILL, LLC
13570 St. Charles Rock Road
St. Louis, MO 63044

COMPANY NAME:

CORRESPONDENCE

FROM ¹⁹⁹⁶~~1997~~ THRU ²⁰⁰¹~~2003~~



CORRESPONDENCE LOCATED
IN OVERFLOW FILE